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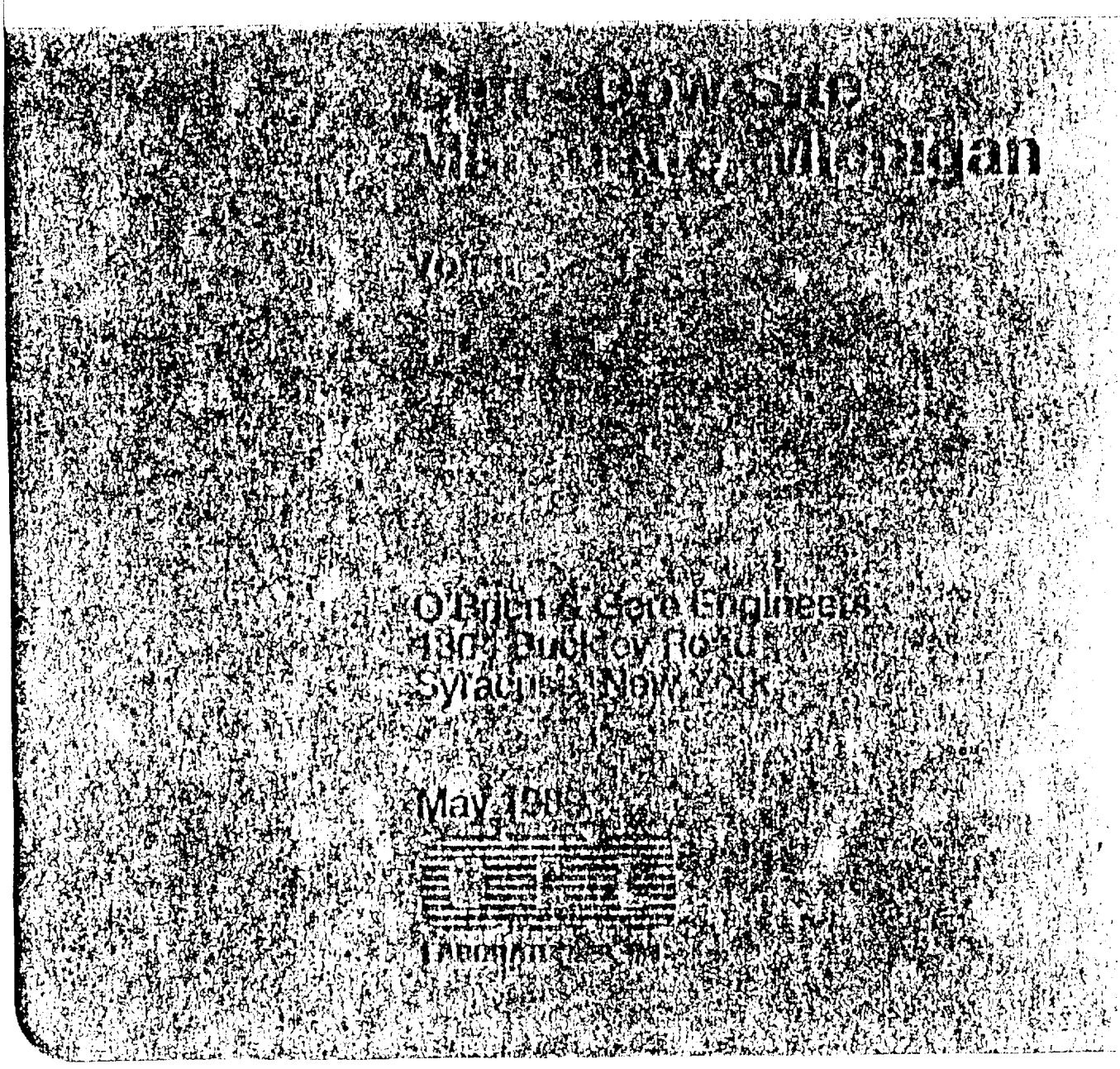
Laboratory Report



ANALYTICAL PACKAGE

Cliff-Dow Site
Marquette, Michigan

Volume 1 of 3

Samples Received April 14, 1989

Prepared for: O'Brien & Gere Engineers, Inc.
1304 Buckley Road
Syracuse, NY 13221

Prepared by: OBG Laboratories, Inc.
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Syracuse, New York 13221

Authorized Gregory N. Mansel

Date May 18, 1989

Reviewed GNM

Date 5-18-89

TABLE OF CONTENTS

NARRATIVE

INTRODUCTION/LABORATORY RESULTS

This report summarizes the results of the analyses of five soil samples for Volatile and SemiVolatile organics. The samples were delivered in April, 1989, from the Cliff-Dow site in Marquette, Michigan, and analyzed by OBG Laboratories, Inc. The analytical results are reported in Section 1 on standard Contract Laboratory Program (CLP) forms.

CHAIN OF CUSTODY/LAB CHRONICLE

The samples were collected at the Cliff-Dow site in Marquette, Michigan, by O'Brien & Gere Engineers, Inc. and hand-delivered to OBG Laboratories, Inc. in Syracuse, New York. The chain of custody forms documenting this transfer are presented in Section 2. When the samples were received by the Laboratory, the sample coordinators inspected and processed the samples for analysis. Samples were placed in a secured walk-in cooler. When chemists removed these samples for testing, Sample Control Records were signed to document the chain of custody. Attached also is a letter of authorization for the analysis of the samples.

METHODOLOGY

The soil samples were analyzed using procedures listed in the USEPA CONTRACT LABORATORY Statement of Work for Organics Analysis Multi-Media, Multi-Concentration 2/88.

QUALITY CONTROL

The quality control program included laboratory blanks, matrix spikes, matrix spike duplicates and surrogate recoveries. This documentation is included in each of the respective portions of the packages. The QC results are included in the CLP format.

CASE NARRATIVE - VOAs

No excursions were noted.

Samples TP-3 and TP-6 gave complex chromatograms, with the library searches revealing several tentatively-identified hydrocarbons.

CASE NARRATIVE - BNAs

Because of matrix effects from the carbon-like samples, not all surrogate recoveries and matrix spike recoveries were within QC limits. This is summarized as Form 3. Very complex chromatograms were noted that affected the last two internal standard areas (see Form 8).

RAW DATA

The raw data from the analyses are presented in a CLP format in Section 3. Also included are the assignment sheets for the projects, along with copies of the instrument injection logbook pages pertaining to the sample analyses.

SECTION 1

LABORATORY RESULTS

For reporting results, the following EPA contract-specific qualifiers are used:

U Indicates compound was analyzed for, but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J Indicates an estimated values. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but, the result is less than the sample quantitation limit but greater than zero. The sample quantitation limit must be adjusted for both dilution and percent moisture.

B This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed.

D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3589

Sample wt/vol: 4.0 (g/mL) g Lab File ID: >V2322

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 61 Date Analyzed: 04/18/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	3300.	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	1600.	
67-64-1	Acetone	3300.	
75-15-0	Carbon Disulfide	1600.	
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform	190.	J
107-06-2	1,2-Dichloroethane	1600.	U
78-93-3	2-Butanone	1900.	JB
71-55-6	1,1,1-Trichloroethane	1600.	U
56-23-5	Carbon Tetrachloride	1600.	
108-05-4	Vinyl Acetate	3300.	
75-27-4	Bromodichloromethane	1600.	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene	250.	J
10061-02-6	trans-1,3-Dichloropropene	1600.	U
75-25-2	Bromoform	1600.	
108-10-1	4-Methyl-2-Pentanone	3300.	
591-78-6	2-Hexanone	3300.	
127-18-4	Tetrachloroethene	1600.	
79-34-5	1,1,2,2-Tetrachloroethane	1600.	
108-88-3	Toluene	260.	J
108-90-7	Chlorobenzene	1600.	U
100-41-4	Ethylbenzene		U
100-42-5	Styrene		U
1330-20-7	Xylene (total)	300.	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP2
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3589

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2322

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 61 Date Analyzed: 04/18/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3590

Sample wt/vol: 4.0 (g/mL) g Lab File ID: >V2323

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 48 Date Analyzed: 04/18/89

Column: (pack/cap) PACK Dilution Factor: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	2400.	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	220.	J
67-64-1	Acetone	1600.	J
75-15-0	Carbon Disulfide	1200.	U
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform	140.	J
107-06-2	1,2-Dichloroethane	1200.	U
78-93-3	2-Butanone	1300.	JB
71-55-6	1,1,1-Trichloroethane	1200.	U
56-23-5	Carbon Tetrachloride	1200.	
108-05-4	Vinyl Acetate	2400.	
75-27-4	Bromodichloromethane	1200.	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene		
75-25-2	Bromoform		
108-10-1	4-Methyl-2-Pentanone	2400.	
591-78-6	2-Hexanone	2400.	
127-18-4	Tetrachloroethene	1200.	
79-34-5	1,1,2,2-Tetrachloroethane	1200.	
108-88-3	Toluene	2200.	
108-90-7	Chlorobenzene	1200.	U
100-41-4	Ethylbenzene	4400.	
100-42-5	Styrene	1200.	U
1330-20-7	Xylene (total)	18000.	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP3
Test Pit
Sun Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3500

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2323

Level: (low/med) MED Date Received: 04/24/90

% Moisture: not dec. 48 Date Analyzed: 04/25/90

Column: (pack/cap) PACK Dilution Factor: _____

Number TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	24.88	5900	J
2.		UNKNOWN HYDROCARBON	30.39	4700	J
3.	103651	BENZENE, PROPYL	30.67	4900	J
4.	271896	BENZOFURAN	31.92	6800	J
5.		UNKNOWN	33.41	22000	J
6.		BENZENE ETHYL METHYL ISOMER	34.50	24000	J
7.		UNKNOWN C10H14	37.37	5400	J
8.		UNKNOWN C9H8	39.11	13000	J
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-4
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

ab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3591RE

ample wt/vol: 4.0 (g/mL) g Lab File ID: >V2330

vel: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 49 Date Analyzed: 04/19/89

olumn: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/kg	Q
74-87-3	Chloromethane	2400.	U
74-83-9	Bromomethane	2400.	U
75-01-4	Vinyl Chloride	570.	J
75-00-3	Chloroethane	2400.	U
75-09-2	Methylene Chloride	1200.	U
67-64-1	Acetone	2400.	U
75-15-0	Carbon Disulfide	1200.	U
75-35-4	1,1-Dichloroethene		U
75-34-3	1,1-Dichloroethane		U
540-59-0	1,2-Dichloroethene (total)	290.	U
67-66-3	Chloroform	220.	J
107-06-2	1,2-Dichloroethane	1200.	U
78-93-3	2-Butanone	980.	J
71-55-6	1,1,1-Trichloroethane	1200.	U
56-23-5	Carbon Tetrachloride	1200.	
108-05-4	Vinyl Acetate	2400.	
75-27-4	Bromodichloromethane	1200.	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene		
75-25-2	Bromoform		
108-10-1	4-Methyl-2-Pentanone	2400.	
591-78-6	2-Hexanone	2400.	
127-18-4	Tetrachloroethene	880.	J
79-34-5	1,1,2,2-Tetrachloroethane	1200.	U
108-88-3	Toluene	260.	J
108-90-7	Chlorobenzene	1200.	U
100-41-4	Ethylbenzene		
100-42-5	Styrene		
1330-20-7	Xylene (total)	330.	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP4
Test P.t
Sub Sample

Lab Name: ORG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3591RE

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2330

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 49 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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6.					
7.					
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27.					
28.					
29.					
30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-5
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3592

Sample wt/vol: 4.0 (g/mL) g Lab File ID: >V2333

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 46 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	2300.	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	1200.	
67-64-1	Acetone	1300.	J
75-15-0	Carbon Disulfide	1200.	U
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform		
107-06-2	1,2-Dichloroethane		
78-93-3	2-Butanone	1200.	J
71-55-6	1,1,1-Trichloroethane	1200.	U
56-23-5	Carbon Tetrachloride	1200.	
108-05-4	Vinyl Acetate	2300.	
75-27-4	Bromodichloromethane	1200.	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene	140.	J
10061-02-6	trans-1,3-Dichloropropene	1200.	U
75-25-2	Bromoform	1200.	
108-10-1	4-Methyl-2-Pentanone	2300.	
591-78-6	2-Hexanone	2300.	
127-18-4	Tetrachloroethene	1200.	
79-34-5	1,1,2,2-Tetrachloroethane		
108-88-3	Toluene		
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene		
100-42-5	Styrene		
1330-20-7	Xylene (total)		

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP5
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3592

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2333

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 46 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-6 Test Pit Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3593

Sample wt/vol: 4.0 (g/mL) g Lab File ID: >V2334

Level: (low/med) Med. Date Received: 04/14/89

% Moisture: not dec. 46 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	2300.	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	260.	J
67-64-1	Acetone	2300.	U
75-15-0	Carbon Disulfide	1200.	
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform		
107-06-2	1,2-Dichloroethane		
78-93-3	2-Butanone	2300.	
71-55-6	1,1,1-Trichloroethane	1200.	
56-23-5	Carbon Tetrachloride	1200.	
108-05-4	Vinyl Acetate	2300.	
75-27-4	Bromodichloromethane	1200.	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene		
75-25-2	Bromoform		
108-10-1	4-Methyl-2-Pentanone	2300.	
591-78-6	2-Hexanone	2300.	
127-18-4	Tetrachloroethene	1200.	
79-34-5	1,1,2,2-Tetrachloroethane	1200.	
108-88-3	Toluene	1200.	
108-90-7	Chlorobenzene	1200.	U
100-41-4	Ethylbenzene	2400.	
100-42-5	Styrene	1200.	U
1330-20-7	Xylene (total)	7500	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TP6
Test Pit
Sub Sample

Lab Name: OBG LABORATORIES INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3593

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2334

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 46 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 10 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		C9H16 HYDROCARBON	25.00	7200	J
2.		CYCLOHEXANE, ETHYL, METHYL ISOM	26.16	4300	J
3.		UNKNOWN HYDROCARBON	26.84	4800	J
4.		UNKNOWN HYDROCARBON	30.33	39000	J
5.		UNKNOWN	31.92	7500	J
6.		UNKNOWN	33.42	19000	J
7.		UNKNOWN	34.44	42000	J
8.		UNKNOWN	36.34	19000	J
9.		UNKNOWN HYDROCARBON	38.43	22000	J
10.		UNKNOWN	38.99	39000	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3589DL

Sample wt/vol: 29.9 (g/mL) g Lab File ID: >SA937

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 61 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
108-95-2	Phenol	11000.	D
111-44-4	bis(2-Chloroethyl)ether	8600.	U
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol	15000.	D
108-60-1	bis(2-Chloroisopropyl)ether	8600.	U
106-44-5	4-Methylphenol	57000.	D
621-64-7	N-Nitroso-di-n-propylamine	8600.	U
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol	41000.	D
65-85-0	Benzoic acid	42000.	U
111-91-1	bis(2-Chloroethoxy)methane	8600.	U
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene	3700.	DJ
106-47-8	4-Chloroaniline	8600.	U
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2,4,6-Trichlorophenol		
95-95-4	2,4,5-Trichlorophenol	42000.	U
91-58-7	2-Chloronaphthalene	8600.	U
88-74-4	2-Nitroaniline	42000	U
131-11-3	Dimethylphthalate	8600.	U
208-96-8	Acenaphthylene		
606-20-2	2,6-Dinitrotoluene		

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-2

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3589DL

Sample wt/vol: 29.9 (g/mL) g Lab File ID: >SA937

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 61 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
99-09-2	3-Nitroaniline	42000.	U
83-32-9	Acenaphthene	8600.	U
51-28-5	2,4-Dinitrophenol	42000.	U
100-02-7	4-Nitrophenol	42000.	U
132-64-9	Dibenzofuran	1800.	DJ
121-14-2	2,4-Dinitrotoluene	8600.	U
84-66-2	Diethylphthalate		
7005-72-3	4-Chlorophenyl-phenylether		
86-73-7	Fluorene	1800.	DJ
100-01-6	4-Nitroaniline	42000.	U
534-52-1	4,6-Dinitro-2-methylphenol	42000.	U
86-30-6	N-Nitrosodiphenylamine (1)	8600.	U
101-55-3	4-Bromophenyl-phenylether		
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	42000.	U
85-01-8	Phenanthrene	2400.	DJ
120-12-7	Anthracene	680.	DJ
84-74-2	Di-n-butylphthalate	8600.	U
206-44-0	Fluoranthene	1400.	D
129-00-0	Pyrene	1800.	D
85-68-7	Butylbenzylphthalate	8600	U
91-94-1	3,3'-Dichlorobenzidine	17000	U
56-55-3	Benzo(a)anthracene	8600	U
218-01-9	Chrysene		
117-81-7	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate		
205-99-2	Benzo(b)fluoranthene		
207-08-9	Benzo(k)fluoranthene		
50-32-8	Benzo(a)pyrene		
193-39-5	Indeno(1,2,3-cd)pyrene		
53-70-3	Dibenz(a,h)anthracene		
191-24-2	Benzo(g,h,i)perylene		

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

TP-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3559DL

Sample wt/vol: 29.9 (g/mL) G Lab File ID: >51937

Level: (low/med) LOW Date Received: 04/14/89

Moisture: not dec. 61 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.43	82,000	JD
2.	112072-5	CYCLOPENTANONE, 2-METHYL-	5.37	7000	
3.		UNKNOWN	5.50	46,000	
4.		"	9.71	18,000	
5.		BENZOFURAN, -METHYL- (ISOMER)	10.92	5200	
6.		UNKNOWN	11.57	7000	
7.	526-75-0	PHENOL, 2,3-DIMETHYL-	13.14	48,000	
8.		UNKNOWN	12.52	14,000	
9.		PHENOL, -TRIMETHYL- (ISOMER)	12.66	7200	
10.	1849-54-6	1H-BENZIMIDAZOLE, 2-ETHYL-	12.83	6700	
11.		UNKNOWN CG HYDROCARBON	13.23	12,000	
12.	3855-26-3	PHENOL, 2-ETHYL-4-METHYL-	13.55	33,000	
13.	496-78-6	PHENOL, 2,4,5-TRIMETHYL-	13.69	7200	
14.		PHENOL, -TRIMETHYL- (ISOMER)	13.76	5400	
15.		UNKNOWN	14.36	5500	
16.		"	14.55	5500	
17.		"	23.25	13,000	
18.		"	33.29	52,000	
19.		"	33.45	56,000	
20.		"	34.00	53,000	
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3590DL2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >B0395

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 48 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/26/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
108-95-2	Phenol	120000.	D
111-44-4	bis(2-Chloroethyl)ether	63000.	U
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol	120000.	D
108-60-1	bis(2-Chloroisopropyl)ether	63000.	U
106-44-5	4-Methylphenol	240000.	D
621-64-7	N-Nitroso-di-n-propylamine	63000.	U
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol	120000.	D
65-85-0	Benzoic acid	300000.	U
111-91-1	bis(2-Chloroethoxy)methane	63000.	
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene	20000.	JD
106-47-8	4-Chloroaniline	63000.	U
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-methylphenol		
91-57-6	2-Methylnaphthalene	42000.	JD
77-47-4	Hexachlorocyclopentadiene	63000.	U
88-06-2	2,4,6-Trichlorophenol	63000.	U
95-95-4	2,4,5-Trichlorophenol	300000.	U
91-58-7	2-Chloronaphthalene	63000.	U
88-74-4	2-Nitroaniline	300000.	U
131-11-3	Dimethylphthalate	63000.	U
208-96-8	Acenaphthylene		
606-20-2	2,6-Dinitrotoluene		

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-3

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3590DL2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >B0395

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 48 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/26/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
99-09-2	3-Nitroaniline	300000.	U
83-32-9	Acenaphthene	63000.	U
51-28-5	2,4-Dinitrophenol	300000.	U
100-02-7	4-Nitrophenol	300000.	U
132-64-9	Dibenzofuran	63000.	U
121-14-2	2,4-Dinitrotoluene		
84-66-2	Diethylphthalate		
7005-72-3	4-Chlorophenyl-phenylether		
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	300000	U
534-52-1	4,6-Dinitro-2-methylphenol	300000	U
86-30-6	N-Nitrosodiphenylamine (1)	63000.	U
101-55-3	4-Bromophenyl-phenylether		
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	300000.	U
85-01-8	Phenanthrene	14000	JD
120-12-7	Anthracene	63000.	U
84-74-2	Di-n-butylphthalate		
206-44-0	Fluoranthene		
129-00-0	Pyrene		
85-68-7	Butylbenzylphthalate		
91-94-1	3,3'-Dichlorobenzidine	130000	U
56-55-3	Benzo(a)anthracene	63000.	U
218-01-9	Chrysene		
117-81-7	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate		
205-99-2	Benzo(b)fluoranthene		
207-08-9	Benzo(k)fluoranthene		
50-32-8	Benzo(a)pyrene		
193-39-5	Indeno(1,2,3-cd)pyrene		
53-70-3	Dibenz(a,h)anthracene		
191-24-2	Benzo(g,h,i)perylene		

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

TP3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3590DL2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >B0395

Level: (low/med) LOW Date Received: 04/14/89

Moisture: not dec. 48 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/26/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 100

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.56	600,000	JD
2.		"	11.99	11,000	
3.		PHENOL, ETHYL, (ISOMER	13.39	81,000	
4.		UNKNOWN	13.79	56,000	
5.		UNKNOWN C9H12O	13.98	33,000	
6.		UNKNOWN	14.84	63,000	
7.		"	15.17	49,000	
8.	91191	PHENOL, 2,6-DIMETHOXY-	16.23	76,000	
9.		UNKNOWN	17.59	23,000	
10.		UNKNOWN C13H14	19.04	31,000	
11.		UNKNOWN HYDROCARBON	20.73	35,000	
12.		" "	20.91	31,000	
13.		" "	22.95	50,000	
14.		" "	24.02	48,000	
15.		" "	25.91	690,000	
16.		" "	25.97	64,000	
17.		" "	26.57	59,000	
18.		" "	27.31	74,000	
19.		" "	27.75	56,000	
20.		" "	29.49	66,000	JV
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-4

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3591DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: >SA940

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 49 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/kg	Q
108-95-2	Phenol	6700.	JD
111-44-4	bis(2-Chloroethyl)ether	6800.	U
95-57-8	2-Chlorophenol	↓	↓
541-73-1	1,3-Dichlorobenzene	↓	↓
106-46-7	1,4-Dichlorobenzene	↓	↓
100-51-6	Benzyl alcohol	↓	↓
95-50-1	1,2-Dichlorobenzene	↓	↓
95-48-7	2-Methylphenol	8200.	D
108-60-1	bis(2-Chloroisopropyl)ether	6800.	U
106-44-5	4-Methylphenol	29000.	D
621-64-7	N-Nitroso-di-n-propylamine	6800.	U
67-72-1	Hexachloroethane	↓	↓
98-95-3	Nitrobenzene	↓	↓
78-59-1	Isophorone	↓	↓
88-75-5	2-Nitrophenol	↓	↓
105-67-9	2,4-Dimethylphenol	16000.	D
65-85-0	Benzoic acid	34000.	U
111-91-1	bis(2-Chloroethoxy)methane	6800.	↓
120-83-2	2,4-Dichlorophenol	↓	↓
120-82-1	1,2,4-Trichlorobenzene	↓	↓
91-20-3	Naphthalene	5700.	D
106-47-8	4-Chloroaniline	6800.	U
87-68-3	Hexachlorobutadiene	↓	↓
59-50-7	4-Chloro-3-methylphenol	↓	↓
91-57-6	2-Methylnaphthalene	12000.	D
77-47-4	Hexachlorocyclopentadiene	6800.	U
88-06-2	2,4,6-Trichlorophenol	↓	↓
95-95-4	2,4,5-Trichlorophenol	34000.	↓
91-58-7	2-Chloronaphthalene	6800.	↓
88-74-4	2-Nitroaniline	↓	↓
131-11-3	Dimethylphthalate	↓	↓
208-96-8	Acenaphthylene	↓	↓
606-20-2	2,6-Dinitrotoluene	↓	↓

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-4

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3591DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: >SA940

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 49 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
99-09-2	3-Nitroaniline	34000.	U
83-32-9	Acenaphthene	6800.	
51-28-5	2,4-Dinitrophenol	34000.	
100-02-7	4-Nitrophenol	↓	↓
132-64-9	Dibenzofuran	5700	JD
121-14-2	2,4-Dinitrotoluene	6800.	U
84-66-2	Diethylphthalate	↓	↓
7005-72-3	4-Chlorophenyl-phenylether	↓	↓
86-73-7	Fluorene	5500.	JD
100-01-6	4-Nitroaniline	34000.	U
534-52-1	4,6-Dinitro-2-methylphenol	↓	↓
86-30-6	N-Nitrosodiphenylamine (1)	6800	
101-55-3	4-Bromophenyl-phenylether	↓	↓
118-74-1	Hexachlorobenzene	↓	↓
87-86-5	Pentachlorophenol	34000.	↓
85-01-8	Phenanthrene	6300.	JD
120-12-7	Anthracene	1600.	JD
84-74-2	Di-n-butylphthalate	6800	U
206-44-0	Fluoranthene	2000.	D
129-00-0	Pyrene	4400.	JD
85-68-7	Butylbenzylphthalate	6800	U
91-94-1	3,3'-Dichlorobenzidine	14000	
56-55-3	Benzo(a)anthracene	6800	
218-01-9	Chrysene	↓	↓
117-81-7	bis(2-Ethylhexyl)phthalate	↓	↓
117-84-0	Di-n-octylphthalate	↓	↓
205-99-2	Benzo(b)fluoranthene	↓	↓
207-08-9	Benzo(k)fluoranthene	↓	↓
50-32-8	Benzo(a)pyrene	↓	↓
193-39-5	Indeno(1,2,3-cd)pyrene	↓	↓
53-70-3	Dibenz(a,h)anthracene	↓	↓
191-24-2	Benzo(g,h,i)perylene	↓	↓

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TP-4

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: J3547DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: >3A947

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 49 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 10

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	4.45	89,000	JD
2.		UNKNOWN	5.52	45,000	
3.		"	10.38	6100	
4.		"	10.99	8300	
5.		PHENOL, -DIMETHYL- (ISOMER)	12.11	9400	
6.		UNKNOWN	13.56	15,000	
7.		"	14.37	13,000	
8.		"	14.59	7500	
9.		UNKNOWN HYDROCARBON	15.62	8100	
10.		NAPHTHALENE, -DIMETHYL- (ISOMER)	15.75	8100	
11.		NAPHTHALENE, -DIMETHYL- (ISOMER)	15.96	11,000	
12.		NAPHTHALENE, -DIMETHYL- (ISOMER)	16.24	6300	
13.		UNKNOWN	16.39	7600	
14.		UNKNOWN HYDROCARBON	16.97	6800	
15.		NAPHTHALENE, -TRIMETHYL- (ISOMER)	17.97	7900	
16.		UNKNOWN HYDROCARBON	19.41	9200	
17.		UNKNOWN C15H16	19.94	12,000	
18.		UNKNOWN HYDROCARBON	21.60	8400	
19.		" "	22.64	11,000	
20.		" "	23.60	9500	↓
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-5

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3592DL

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >SA939

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
108-95-2	Phenol	6100.	U
111-44-4	bis(2-Chloroethyl)ether		
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol		
108-60-1	bis(2-Chloroisopropyl)ether		
106-44-5	4-Methylphenol		
621-64-7	N-Nitroso-di-n-propylamine		
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol	19000.	D
65-85-0	Benzoic acid	30000.	U
111-91-1	bis(2-Chloroethoxy)methane	6100.	U
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene	1800.	DJ
106-47-8	4-Chloroaniline	6100.	U
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-methylphenol		
91-57-6	2-Methylnaphthalene		
77-47-4	Hexachlorocyclopentadiene		
88-06-2	2,4,6-Trichlorophenol		
95-95-4	2,4,5-Trichlorophenol	30000.	U
91-58-7	2-Chloronaphthalene	6100.	U
88-74-4	2-Nitroaniline	30000.	U
131-11-3	Dimethylphthalate	6100.	U
208-96-8	Acenaphthylene		
606-20-2	2,6-Dinitrotoluene		

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-5

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3592DL

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >SA939

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
99-09-2	3-Nitroaniline	30000.	U
83-32-9	Acenaphthene	6100.	U
51-28-5	2,4-Dinitrophenol	30000.	U
100-02-7	4-Nitrophenol	30000.	U
132-64-9	Dibenzofuran	6100.	U
121-14-2	2,4-Dinitrotoluene		
84-66-2	Diethylphthalate		
7005-72-3	4-Chlorophenyl-phenylether		
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	30000.	U
534-52-1	4,6-Dinitro-2-methylphenol	30000.	U
86-30-6	N-Nitrosodiphenylamine (1)	6100.	U
101-55-3	4-Bromophenyl-phenylether		
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	30000.	U
85-01-8	Phenanthrene	920.	JD
120-12-7	Anthracene	6100.	U
84-74-2	Di-n-butylphthalate		
206-44-0	Fluoranthene	540	JD
129-00-0	Pyrene	650	JD
85-68-7	Butylbenzylphthalate	6100.	U
91-94-1	3,3'-Dichlorobenzidine	12000.	U
56-55-3	Benzo(a)anthracene	6100.	U
218-01-9	Chrysene		
117-81-7	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate		
205-99-2	Benzo(b)fluoranthene		
207-08-9	Benzo(k)fluoranthene		
50-32-8	Benzo(a)pyrene		
193-39-5	Indeno(1,2,3-cd)pyrene		
53-70-3	Dibenz(a,h)anthracene		
191-24-2	Benzo(g,h,i)perylene		

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

TP-5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3592DL

Sample wt/vol: 30.2 (g/mL) g Lab File ID: >SA939

Level: (low/med) LOW Date Received: 04/14/89

Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 10

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.46	57,000	JD
2.		"	5.52	44,000	
3.	4971130	CYCLOPENTANONE, 2-ETHYL-	7.62	7400	
4.		UNKNOWN	9.69	21,000	
5.		UNKNOWN C8H12O	10.16	13,000	
6.		PHENOL, -DIMETHYL- (ISOMER)	12.15	31,000	
7.		PHENOL, -DIMETHYL- (ISOMER)	12.53	14,000	
8.		PHENOL, -TRIMETHYL (ISOMER)	12.68	13,000	
9.		PHENOL, -TRIMETHYL- (ISOMER)	13.12	5600	
10.		PHENOL, -(1-METHYLETHYL)-(ISO)	13.24	6500	
11.		UNKNOWN C9H12O	13.53	4300	
12.		PHENOL, -ETHYL- METHYL- (ISOMER)	13.61	21,000	
13.		PHENOL, -TRIMETHYL- (ISOMER)	13.70	9200	
14.		PHENOL, -TRIMETHYL- (ISOMER)	13.79	12,000	
15.		UNKNOWN	13.86	6100	
16.		"	14.48	9900	
17.		"	14.91	13,000	
18.		"	14.98	5700	
19.		"	22.25	6200	
20.		"	23.32	10,000	
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-6

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: I3593DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: >SA938

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) µg/kg	Q
108-95-2	Phenol	14000.	D
111-44-4	bis(2-Chloroethyl)ether	6100.	U
95-57-8	2-Chlorophenol		
541-73-1	1,3-Dichlorobenzene		
106-46-7	1,4-Dichlorobenzene		
100-51-6	Benzyl alcohol		
95-50-1	1,2-Dichlorobenzene		
95-48-7	2-Methylphenol		
108-60-1	bis(2-Chloroisopropyl)ether		
106-44-5	4-Methylphenol	41000.	D
621-64-7	N-Nitroso-di-n-propylamine	6100.	U
67-72-1	Hexachloroethane		
98-95-3	Nitrobenzene		
78-59-1	Isophorone		
88-75-5	2-Nitrophenol		
105-67-9	2,4-Dimethylphenol	29000.	D
65-85-0	Benzoic acid	30000.	U
111-91-1	bis(2-Chloroethoxy)methane	6100.	U
120-83-2	2,4-Dichlorophenol		
120-82-1	1,2,4-Trichlorobenzene		
91-20-3	Naphthalene	6000.	DJ
106-47-8	4-Chloroaniline	6100.	U
87-68-3	Hexachlorobutadiene		
59-50-7	4-Chloro-3-methylphenol		
91-57-6	2-Methylnaphthalene	8500.	D
77-47-4	Hexachlorocyclopentadiene	6100.	U
88-06-2	2,4,6-Trichlorophenol		
95-95-4	2,4,5-Trichlorophenol	30000.	U
91-58-7	2-Chloronaphthalene	6100.	U
88-74-4	2-Nitroaniline	30000.	U
131-11-3	Dimethylphthalate	6100.	U
208-96-8	Acenaphthylene		
606-20-2	2,6-Dinitrotoluene		

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP-6

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: I3593DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: >SA938

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
99-09-2	3-Nitroaniline	30000.	U
83-32-9	Acenaphthene	6100.	U
51-28-5	2,4-Dinitrophenol	30000.	U
100-02-7	4-Nitrophenol	30000.	U
132-64-9	Dibenzofuran	6100.	U
121-14-2	2,4-Dinitrotoluene		
84-66-2	Diethylphthalate		
7005-72-3	4-Chlorophenyl-phenylether		
86-73-7	Fluorene		
100-01-6	4-Nitroaniline	30000.	U
534-52-1	4,6-Dinitro-2-methylphenol	30000.	U
86-30-6	N-Nitrosodiphenylamine (1)	6100.	U
101-55-3	4-Bromophenyl-phenylether		
118-74-1	Hexachlorobenzene		
87-86-5	Pentachlorophenol	30000.	U
85-01-8	Phenanthrene	1600.	DJ
120-12-7	Anthracene	6100.	U
84-74-2	Di-n-butylphthalate		
206-44-0	Fluoranthene		
129-00-0	Pyrene		
85-68-7	Butylbenzylphthalate		
91-94-1	3,3'-Dichlorobenzidine	12000.	U
56-55-3	Benzo(a)anthracene	6100.	U
218-01-9	Chrysene		
117-81-7	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate		
205-99-2	Benzo(b)fluoranthene		
207-08-9	Benzo(k)fluoranthene		
50-32-8	Benzo(a)pyrene		
193-39-5	Indeno(1,2,3-cd)pyrene		
53-70-3	Dibenz(a,h)anthracene		
191-24-2	Benzo(g,h,i)perylene		

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TP-6

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: [illegible] DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: [illegible]

Level: (low/med) LOW Date Received: 04/14/89

% Moisture: not dec. 46 dec. _____ Date Extracted: 04/17/89

Extraction: (SepF/Cont/Sonc) _____ Date Analyzed: 04/18/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	141797	3-PENTEN-2-ONE, 4-METHYL	4.37	68,000	JD
2.		UNKNOWN	5.49	32,000	
3.	52896-74	HEPTANE, 4-(1-METHYLETHYL)-	7.73	20,000	
4.		UNKNOWN	7.99	16,000	
5.		"	8.39	18,000	
6.		"	8.40	20,000	
7.		"	9.40	20,000	
8.	2847726	DECANE, 4-METHYL-	9.47	36,000	
9.		UNKNOWN	10.69	16,000	
10.		PHENOL, -ETHYL- (ISOMER)	12.14	24,000	
11.		UNKNOWN	12.49	9700	
12.		"	12.54	14,000	
13.		"	13.53	17,000	
14.		"	13.77	5500	
15.	1755599	PHENOL, 4-ETHYL-2-METHOXY-	13.87	11,000	
16.		NAPHTHALENE, -METHYL- (ISOMER)	14.39	12,000	
17.	101848	BENZENE, 1,1'-OXYBIS-	15.21	24,000	
18.		NAPHTHALENE, -DIMETHYL- (ISOMER)	15.97	17,000	
19.		UNKNOWN HYDROCARBON	16.45	13,000	
20.		UNKNOWN HYDROCARBON	19.50	19,000	
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

SECTION 2

CHAIN OF CUSTODY

OBG LABORATORIES, INC. CHAIN OF CUSTODY RECORD

SURVEY: CLIFFS-DOW

SAMPLERS: S. KACZMAR.

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water / Comp. / Grab / Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED 8240 8270
TP-2	TEST PIT SUB-SAMPLE	4/14/89	2:20			2	VOA / AE/BN (CLP)
TP-3	TEST PIT SUB SAMPLE.	4/14/89	2:20			2	VOA / AE/BN-(CLP)
TP-4	TEST PIT SUBSAMPLE	4/14/89	2:20			2	VOA / AE-BN-CLP
TP-5	TEST PIT SUBSAMPLE	4/14/89	2:20			2	VOA / AE BN-CLP
TP-6	TEST PIT SUBSAMPL	4/14/89	2:20			2	VOA / AE BN-CLP.

Relinquished by: S. Kacz	Received by:	Date/Time 4/14 2:35
Relinquished by:	Received by:	Date/Time
Relinquished by:	Received by:	Date/Time
Relinquished by:	Received by Mobile Laboratory for field analysis:	Date/Time
Dispatched by:	Date/Time	Received for Laboratory by: [illegible] Date/Time 4/14/89 2:30
Method of Shipment:		

CASE FILE

Survey: Chipp Dow **Date Collected:** 4/14 89

Sampler: S. Kaczman **Date Received:** 4-20

Client Name and Ref. # : Dames and Gee Engineers

Laboratory Number: 3435.001.100

Condition of Shipment: Good. Samples were hand delivered.

Archive? If so how long ? No

Signed: Yvonne Taylor

Sample Coordinator

****

Disposal Procedure * : SAMPLES WILL BE RETURNED TO THE CLIENT

Signed: [signature]

Date: 5-18-89

* The routine disposal procedure for non-hazardous samples is to dispose of the samples 4 weeks after a typed report is signed and mailed to the client. Water samples are filtered through carbon to the sanitary sewer. Solid samples are sent to a sanitary landfill.

Sample Custodian Signature: Maureen Quinlan

Client Name: O'Brien and Gere Engineers

Date of Sample Login: 4/14/89

Project No.: 345001.100

Airbill Number: _____

Bin Number : 34

Circle The Appropriate Response:

1) Custody Seal — Present/Absent; Intact/Not Intact

2) Chain-of-Custody — Present/Absent

3) Sample Tags — Present/Absent

4) Sample Tag #'s — Listed/Not Listed

5) SMO Forms — Present/Absent

Date Rec'd.	Time Rec'd.	Chain-of Custody Record #	SMO Sample Numbers	CORRESPONDING Sample Tag Numbers	CORRESPONDING Assigned Lab Numbers	Does Information On Custody Forms Traffic Reports & Sample Tags Agree ?	Remarks
4/14/89	15:30	—	—	TP-2	I3589	yes	see attached case file
				TP-3	I3590		
				TP-4	I3591		
				TP-5	I3592		
				TP-6	I3593		
				MSTP4	I3625		
				MSDTP4	I3626		

SAMPLE CONTROL RECORD

CLIENT: O'Brien and Gere Engineers DATE REC'D: 4/14/89

JOB #: 3435.001 100 BIN NUMBER: 34

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
I 3589 → 93	M. Flynn	4-17-89 8:30 AM	GNA extraction	4-17-89 9:30 AM
I 3591 → 93	T. Harpster	4-17 89 12:45pm	PCTS	4-17-89 1:10 pm
I 3589 - I3590	K. Stone	04/18/89 10:48	VOACLP	04/18/89 1355
I 3591 - I 3593 I 3625 - I 3624	K Stone	04/18/89 1355	VOACLP	04/18/89 1500
I 3591	K Stone	04/19/89 1100	VOACLP	04/19/89 1400
I 3592, I3593	K Stone	04/19/89 1400	VOACLP	04/19/89 1550

SECTION 3

RAW DATA

Volatile Organics

Medium Soils

Blank
16.4859
-tare = 12.4899g
3.9960g = 3.9g

%solids
50.7 I3591
16.4960
-tare = 12.4762g
4.0198g = 4.0g

I3591 ms
16.4472g
-tare = 12.4462g
4.0010g = 4.0g

I3591 msd
16.5036
-tare = 12.4265g
4.0171g = 4.0g 4.0171 grams

53.5 I3592
16.4681
-tare = 12.4463g
4.0218g = 4.0g

54.1 I3593
16.4186
-tare = 12.4525g
3.9661g = 4.0g

04/13/89

Surrogate Mixture for Medium Level Soil

Pugsley Surrogate Mix #4-8876 Lot# LA20846 (2 vials)
250 ug/ml Concentration

800ul Surrogate Mix 250 ug/ml
+ 7200ul MeOH B&J
8000ul Total
Conc F = 25 ug/ml
(used both vials of Surrogate)
} X2

for total of 16,000ul = 16ml

04/18/89 Blank Medium Level

Soil + T 16.3613 g
Tare = 12.5139 g
3.8474 g
some oda (Tare)

%solids 38.6

I3589
16.4982
Tare = 12.5218 g
3.9714 g = 4.0g

I3590
52.1
16.5534
Tare = 12.5213 g
4.0321 g = 4.0g
strong oda

04/18/89 I3591
16.2987
Tare = 12.4667 g
3.8320 g
some oda

I3592
16.5880
Tare = 12.5269 g
4.0561 g = 4.0g
Acme oda

I3593
16.5547
Tare = 12.5135 g
4.0312 g = 4.0g
strong oda

OEG LABORATORIES INC.

GC/MS INJECTION LOGBOOK

Date 04/17/89 - Instrument HP5970

Column 6x2mm ID Glass ō 1% SP1000 on 60/80 Carbopack B

Project # Client	Job	Phase	Client Name
1042	097	300	QA/QC
3435	001	100	Olsen & Gell Engineers

Bot. # Inj. #	Project # Client	Job	Phase	Sample #	Inj. Vol.	Analysis	Data File Number	Date	Time	DF	IS
1	1042	097	300	10 PPB BFB	5.0ml	BFB STD	V2313	04/17/89	1054	—	—
1	1042	097	300	VSTD050	5.0ml	CLP VOA	V2314	04/17/89	1142	—	✓
1	1042	097	300	VSTD020	5.0ml	CLP VOA	V2315	04/17/89	1253	—	✓
1	1042	097	300	VSTD100	5.0ml	CLP VOA	V2316	04/17/89	1356	—	✓
1	1042	097	300	VSTD150	5.0ml	CLP VOA	V2317	04/17/89	1451	—	✓
1	1042	097	300	VSTD200	5.0ml	CLP VOA	V2318	04/17/89	1547	—	✓
1	1042	097	300	10 PPB BFB	5.0ml	BFB STD	V2319	04/18/89	0836	—	—
1	1042	097	300	VSTD050	5.0ml	CLP VOA	V2320	04/18/89	0919	—	✓
1	1042	097	300	VBLK041801	5.0ml	CLP VOA	V2321	04/18/89	1040	100ul	✓
1	3435	001	100	I3589	5.0ml	CLP VOA	V2322	04/18/89	1152	100ul	✓
1	3435	001	100	I3090	5.0ml	CLP VOA	V2323	04/18/89	1322	100ul	✓
1	3435	001	100	I3591	5.0ml	CLP VOA	V2324	04/18/89	1453	100ul	✓
1	1042	097	300	VBLK041802	5.0ml	CLP VOA	V2325	04/18/89	1508	—	✓
1	1042	097	300	10 PPB BFB	5.0ml	BFB STD	V2326	[illegible]	—	—	—
1	1042	097	300	10 PPB BFB	5.0ml	BFB STD	V2327	[illegible]	0845	—	—
1	1042	097	300	VSTD050	5.0ml	CLP VOA	V2328	04/19/89	0928	—	✓
1	1042	097	300	VBLK041901	5.0ml	CLP VOA	V2329	04/19/89	1037	100ul	✓
1	3435	001	100	I3591RE	5.0ml	CLP VOA	V2330	04/19/89	1144	100ul	✓
1	3435	001	100	I3591MS	5.0ml	CLP VOA	V2331	04/19/89	1300	100ul	✓
1	3435	001	100	I3591MSD	5.0ml	CLP VOA	V2332	04/19/89	[illegible]	100ul	✓
1	3435	001	100	I3592	5.0ml	CLP VOA	V2333	04/19/89	1400	100ul	✓
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	V2334	[illegible]	1545	[illegible]	✓

Notes:
FB = Field Blank
MB = Method Blank
MS = Matrix Spike of Sample #
MSD = Matrix Spike Duplicate of Sample #
D = Duplicate of Sample #
IS = Internal Standard(s)
DF = Dilution Factor

Analyzed by Karen Strom

Signatures(s) Karen Strom

Comments →→ Column @ 220°C for 15 min = Trap Bake for 15 min.
→ V2334 – Repeat last due to HC

New Medium Level 5-Point

OBG Laboratories, Inc.

GC/MS INJECTION LOGBOOK

INTERNAL STD. AREAS IS #1	IS #2	IS #3	SURROGATE AREAS SURR #1	SURR #2	SURR #3	MATRIX Water Low	Soil Low/Med	TAPE NO.			Strm. Tape		RESHOOT (Reason)	Suc. Lib:
—	—	—	—	—	—	✓		✓	✓	✓	✓	Y	—	—
78637	345519	396201	122126	417175	200055		✓ MED	✓	✓	✓	✓	—	IOVML	—
71538	313340	281063	48539	1143326	81325		✓ MED	✓	✓	✓	✓	—	IOVML	—
79582	365950	308936	256849	866126	430127		✓ MED	✓	✓	✓	✓	—	IOVML	—
81913	369871	324881	389854	1344176	651858		✓ MED	✓	✓	✓	✓	—	IOVML	—
81869	381324	323350	518672	1808808	805230		✓ MED	✓	✓	✓	✓	—	IOVML	—
—	—	—	—	—	—	✓		✓	✓	—	—	Y	—	—
81449	373320	333735	124402	435755	226772		✓ MED	✓	✓	✓	✓	Y	IOVML CAOFL	—
81332	369310	330964	123931	456473	216839		✓ MED	✓	✓	✓	✓	Y	IOVML	—
85130	378653	335601	101520	377189	177915		✓ MED	✓	✓	✓	✓	Y	IOVML	—
82495	389015	336746	100834	389990	191069		✓ MED	✓	✓	✓	✓	Y	IOVML HC	?
77360	363067	322219	100880	393596	180405		✓ MED	✓	✓	✓		Y	CAOF-OK [illegible]	?
83555	382575	334616	—	—	—	✓		✓	✓	✓		—	[illegible]	[illegible]
—	—	—	—	—	—	✓		✓	—	—	—	Nl	[illegible]	—
—	—	—	—	—	—	✓		✓	✓	✓	✓	Y		
81442	381913	334379	120326	421060	201810		✓ MED	✓	✓	✓	✓	Y	IOVML CAOFL	—
31799	376166	337144	134376	447772	217516		✓ MED	✓	✓	✓	✓	Y	IOVML	OK
81028	371528	330943	106235	399372	185706		✓ MED	✓	✓	✓	✓	Y	IOVML	OK
78593	363362	321416	98982	366824	173644		✓ MED	✓	✓	✓	✓	Y	IOVML	OK
80327	378883	330984	101089	369125	178477		✓ MED	✓	✓	✓		Y	IOVML	OK
74557	367040	329996	100777	388293	180427		✓ MED	✓	✓	✓		—	IOVML	OK
81657	380417	330717	103534	377741	210804		✓ MED	✓	✓	✓		Y	IOVML	NH OK

COMMENTS

Forms II, III, IV, V

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: OBG LABORATORIES INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Level: (low/med) MED

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	VBLK041801	102	103	100		0
02	I3589	83	83	78		0
03	I3590	85	89	85		0
04	I3591RE	95	91	89		0
(I3625) 05	I3591MS	88	86	85		0
(I3626) 06	I3591MSD	86	85	85		0
07	I3592	91	86	85		0
08	I3593	86	98	87		0
09	VBLK041901	104	104	103		0
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates dilutad out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No.: I3591 Level: (low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	6250	0	5860	94	59-172
Trichloroethene	"	0	5920	95	62-137
Benzene	"	0	6390	102	66-142
Toluene	"	130	6120	96	59-139
Chlorobenzene	"	0	5750	92	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	6250	5820	93	1	22	59-172
Trichloroethene	"	5930	95	0	24	62-137
Benzene	"	6340	101	1	21	66-142
Toluene	"	6120	96	0	21	59-139
Chlorobenzene	"	5860	94	-2	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: Wet weight basis for concentration
Three significant figures used

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: >V2321 Lab Sample ID: VBLK041801

Date Analyzed: 04/18/89 Time Analyzed: 1040

Matrix: (soil/water) SOIL Level: (low/med) MED

Instrument ID: HP5987A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		I3589	>V2322	1152
02		I3590	>V2323	1322
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
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25				
26				
27				
28				
29				
30				

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: >V2329 Lab Sample ID: VBLK041901

Date Analyzed: 04/19/89 Time Analyzed: 1029

Matrix: (soil/water) SOIL Level: (low/med) MED

Instrument ID: HP5987A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		I3591RE	>V2330	1144
02		I3591MS (I3625)	>V2331	1300
03		I3591MSD (I3626)	>V2332	1356
04		I3592	>V2333	1450
05		I3593	>V2334	1545
06				
07				
08				
09				
10				
11				
12				
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30				

COMMENTS: _____

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: OBG Laboratories, Inc. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: >V2313 BFB Injection Date: 04/17/89

Instrument ID: HP5987A BFB Injection Time: 1054

Matrix: (soil/water) SOIL Level: (low/med) MED Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	50.3
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	C ( ) 1
174	Greater than 50.0% of mass 95	68.4
175	5.0 - 9.0% of mass 174	4.7 ( ) 1
176	Greater than 95.0%, but less than 101.0% of mass 174	65.2 ( ) 1
177	5.0 - 9.0% of mass 176	3.7 ( ) 2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>V2314	04/17/89	1142
02		VSTD020	>V2315		1253
03		VSTD100	>V2316		1356
04		VSTD150	>V2317		1459
05		VSTD200	>V2318		1602
06					
07					
08					
09					
10					
11					
12					
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14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

ab Name: OBG Laboratories Inc. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

ab File ID: >V2319 BFB Injection Date: 04/18/89

Instrument ID: HP5987A BFB Injection Time: 0836

atrix: (soil/water) SOIL Level: (low/med) MED Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.3
75	30.0 - 60.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0 (0)1
174	Greater than 50.0% of mass 95	68.0
175	5.0 - 9.0% of mass 174	3.8 (5.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	65.7 (97.0)1
177	5.0 - 9.0% of mass 176	3.7 (5.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>V2320	04/18/89	0719
02		VBLK041801	>V2321		1042
03		I3589	>V2322		1152
04		I3590	>V2323		1322
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: OBG Laboratories, Inc. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: >V2327 BFB Injection Date: 04/19/88

Instrument ID: HP5987A BFB Injection Time: 0845

Matrix: (soil/water) SOIL Level: (low/med) MED Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	45.1
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0 (0)1
174	Greater than 50.0% of mass 95	67.5
175	5.0 - 9.0% of mass 174	4.6 (6.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	65.4 (96.8)1
177	5.0 - 9.0% of mass 176	3.8 (5.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>V2328	04/19/88	0928
02		VBLK041901	>V2329		1039
03		I3591RE	>V2330		1144
04		I3591MS(I3625)	>V2331		1300
05		I3591MSD(I3626)	>V2332		1356
06		I3592	>V2333		1455
07		I3593	>V2334		1545
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Sample Data

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 13:44
Output File: ^V2322::D1 Injected at: 890419 11:52
Data File: ^V2322::D2 Dilution Factor: 1.00000
Name: I3539
Misc: HP5987A OBRIE(3433.001.100)P1

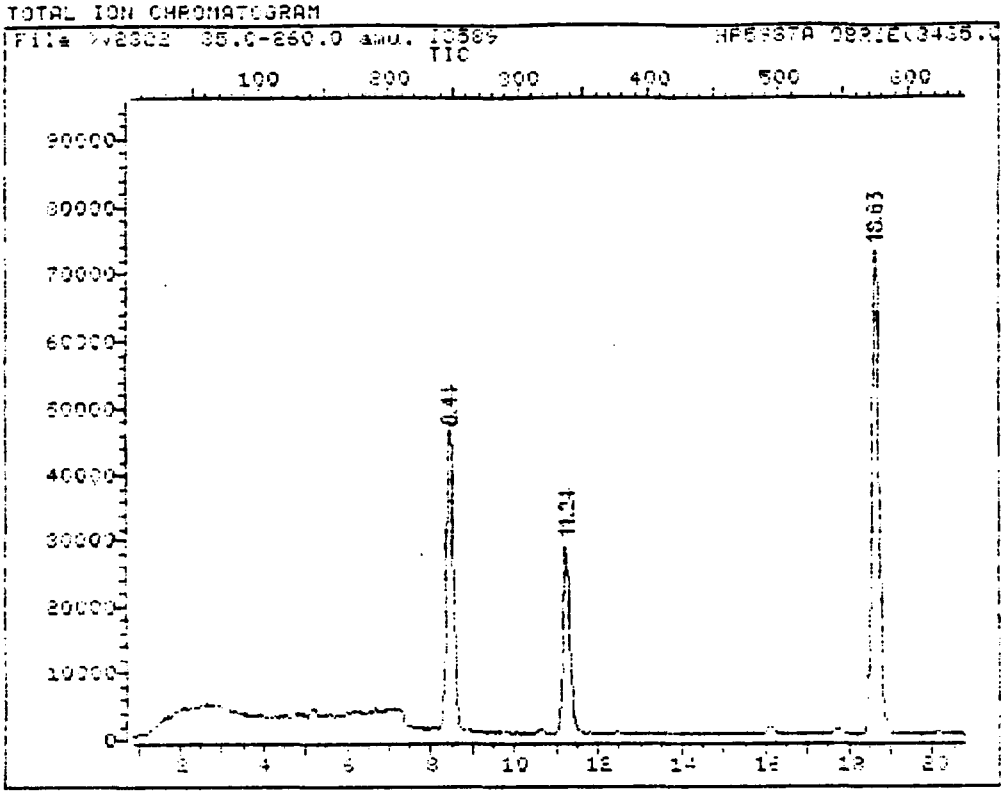
ID File: IDUML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

	Compound	R.T.	Q ion	Area	Conc	Units	%
1)	*Bromochloromethane	8.44	128.0	85137	250.00	NG	98
~~6)~~	~~Methylene Chloride~~	~~5.10~~	~~84.0~~	~~2933~~	~~4.45~~	~~NG~~	~~91~~
~~7)~~	~~Acetone~~	~~6.14~~	~~43.0~~	~~4743~~	~~26.41~~	~~NG~~	~~75~~
13)	Chloroform	10.61	83.0	2786	2.97	NG	99
15)	1,2-Dichloroethane-d4	11.24	65.0	101500	195.14	NG	94
18)	*1,4-Difluorobenzene	18.63	114.0	578683M	250.00	NG	100
19)	2-Butanone	11.36	72.0	1939	28.93	NG	99
27)	Benzene	16.11	78.0	6068	3.85	NG	100
32)	*Chlorobenzene-d5	23.45	117.0	338601M	250.00	NG	97
37)	Toluene-d8	22.25	98.0	377169	208.74	NG	100
38)	Toluene	22.42	92.0	4562	4.00	NG	98
41)	Bromofluorobenzene	27.35	95.0	177915	207.80	NG	84
~~43)~~	~~m-Xylene~~	~~28.80~~	~~106.0~~	~~4335~~	~~4.46~~	~~NG~~	~~99~~
44)	Xylene (total)	29.29	106.0	4362	5.73	NG	99

* Compound is ISTD

$$\text{Xylene} = \frac{4362}{335601} \times \frac{250}{0.70428} = 4.61\ \text{NG}$$

TOTAL ION CHROMATOGRAM

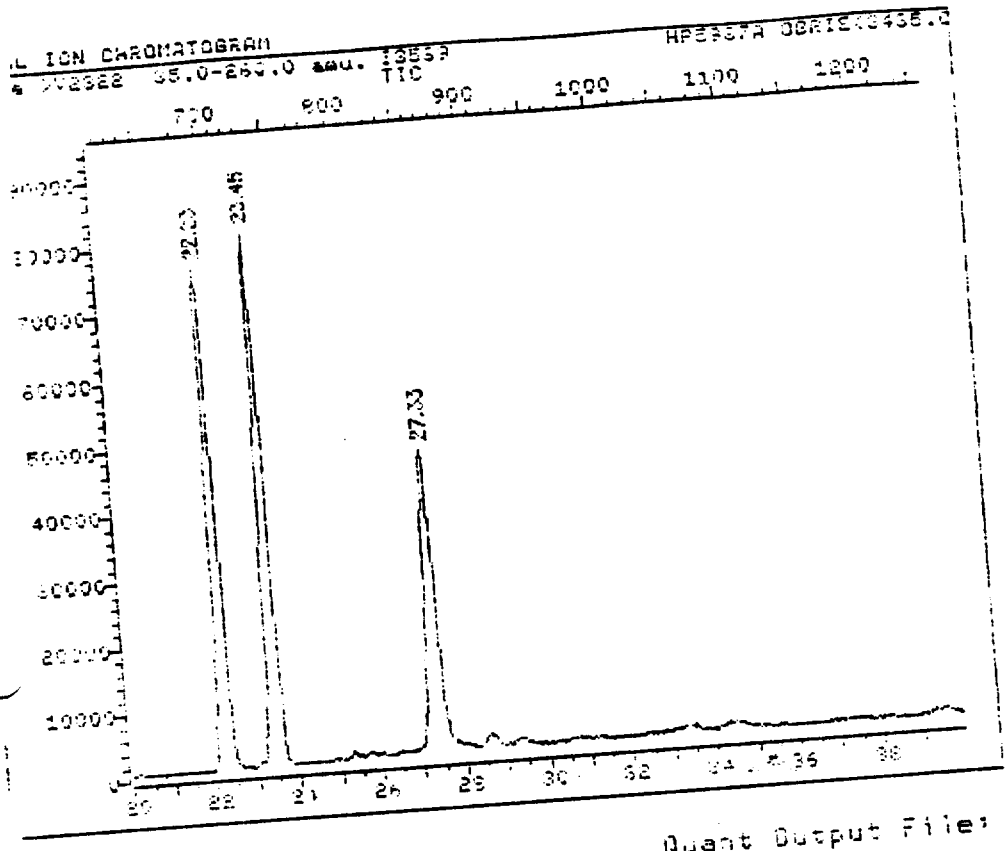


Data File: >V2302:02 Quant Output File: V2302:01
Name: 10509
Misc: HP5987A QBRIE(3435.001.100)PI

Id File: IDUML:EN
Title: CLP 90R ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

Operator ID: KAREN
Quant Time: 890418 12:44
Injected at: 890418 11:52

FID page 1 of 2



Quant Output File: >U2322::D1

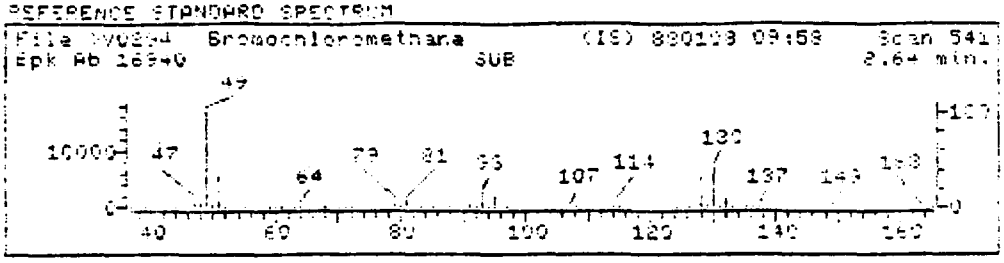
Data File: >U2322::D2
Name: 13587
Misc: HP5987A OBRIE(3435.001.100)P1

Id File: IDUML::EN
Title: CLP UOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

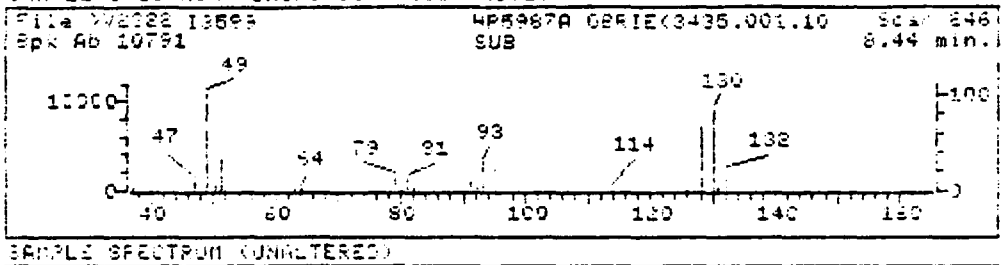
Operator ID: KAREN
Quant Time: 890419 12:44
Injected at: 890419 11:52

TIC page 2 of 2

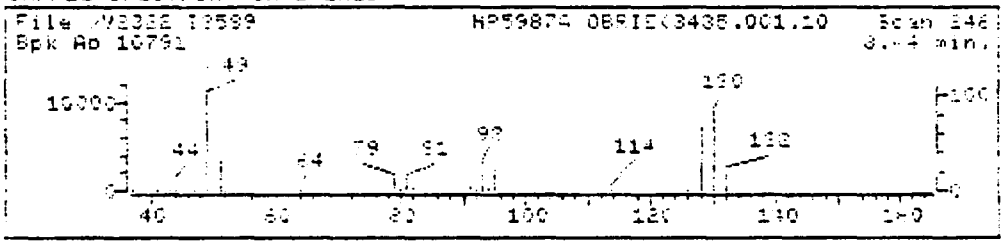
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

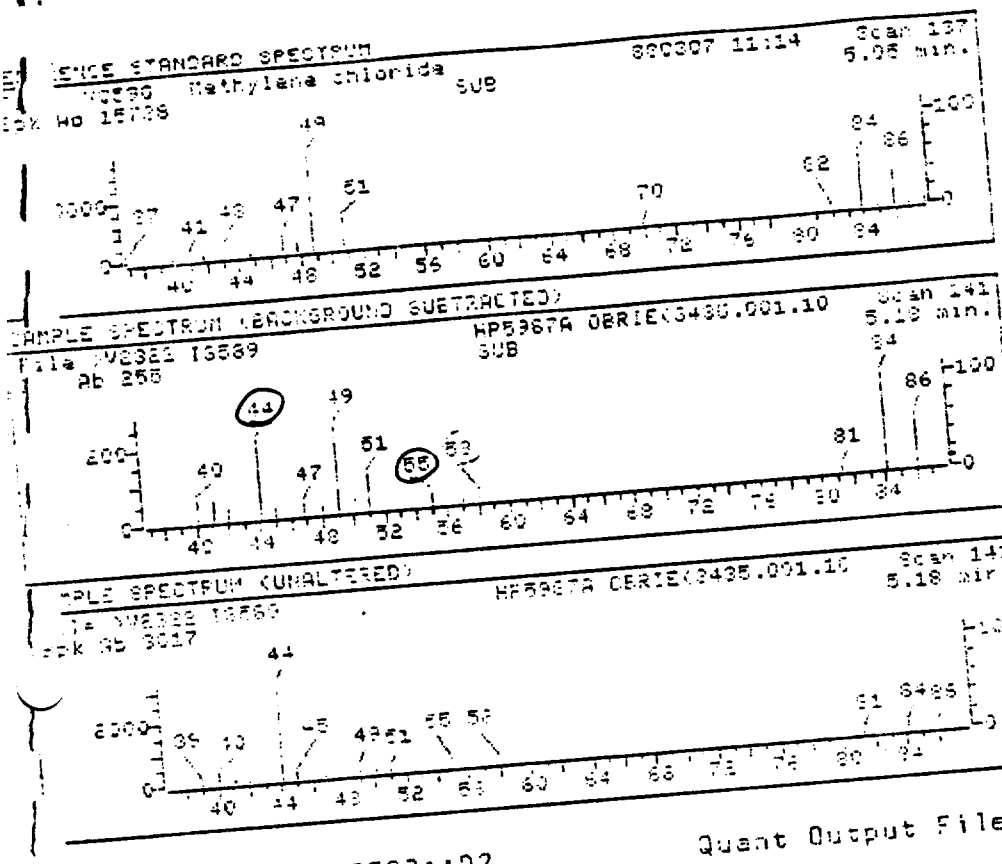


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2322::D2 Quant Output File: 'V2322::D1
Name: I558v
Misc: HP59874 OBRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: IDCML::ED
Injected at: 890418 11:52 Last Calibration: 890413 11:27

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 846
Retention Time: 8.44 min.
Quant ion: 130.
Area: 85137
Concentration: 250.00 NG
q-value: 92



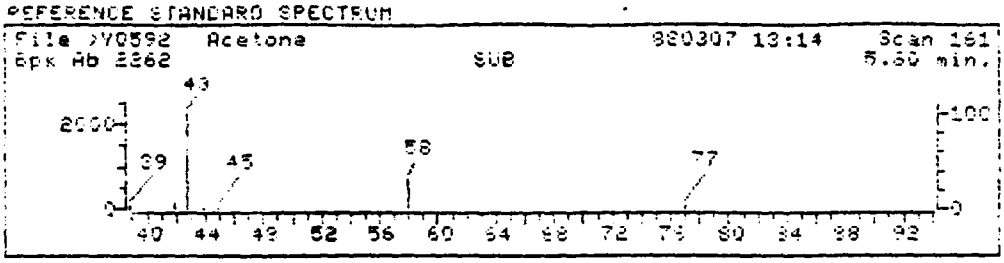
Quant Output File: ^U2322::01

Data File: >U2322::02
Name: I75E0
Misc: HP5987A OBRIE(3435.001.100)F1
Quant Time: 890418 12:44
Injected at: 890418 11:52

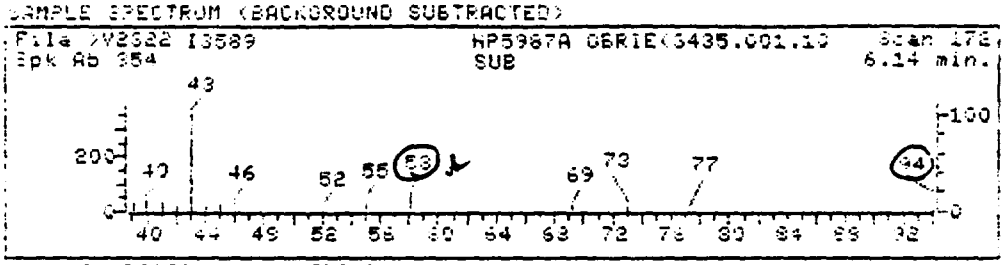
Quant ID File: IQUML::EY
Last Calibration: 890418 11:39

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 141
Retention Time: 5.18 min.
Quant Ion: 84.0
Area: 2536
Concentration: 4.45 NG
q-value: 64

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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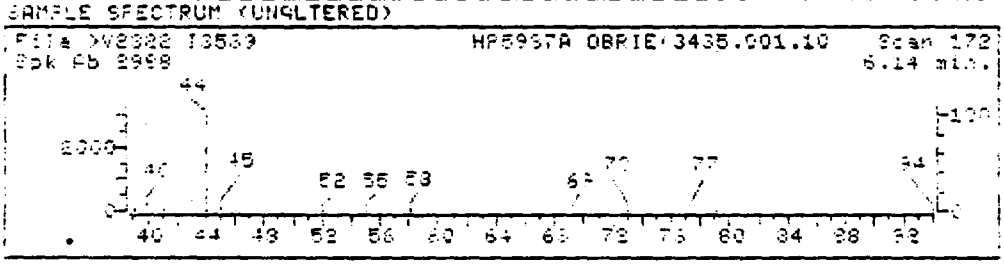
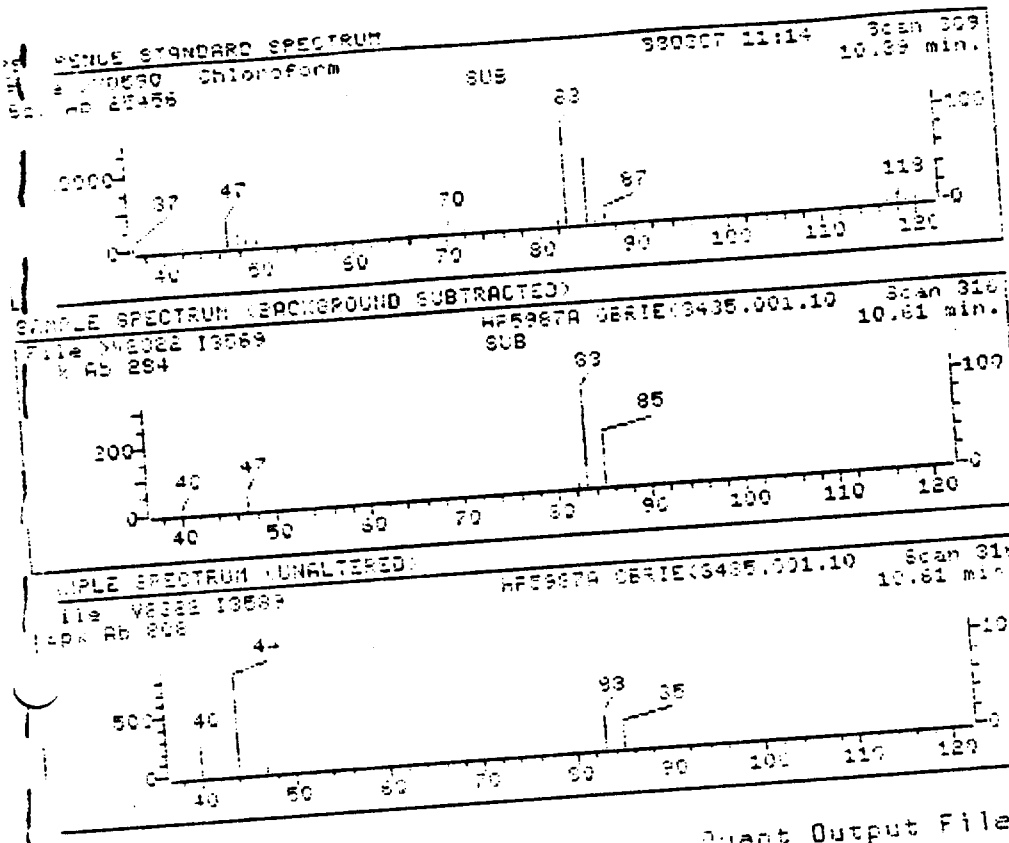


Data File: >V2322::02 Quant Output File: >V2F22::01
Name: I3589
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: IDAML::R1
Injected at: 890418 11:52 Last Calibration: 890418 11:29

Compound No: 7
Compound Name: Acetone
Scan Number: 172
Retention Time: 6.14 min.
Quant Ion: 43.0
Area: 4742
Concentration: 26.41 NG
q-value: 73



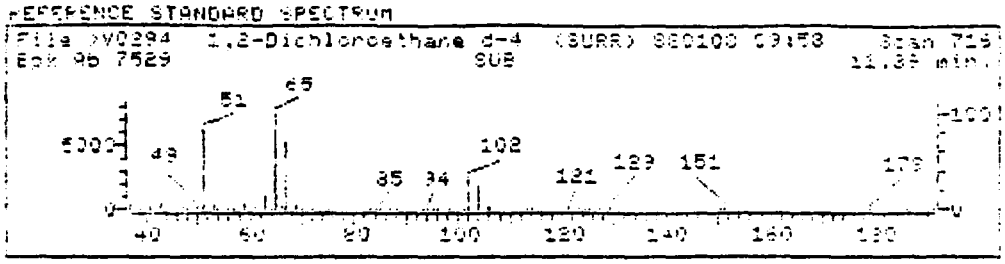
Quant Output File: >V2322::D1

Data File: >V2322::D2
Name: I3589
Misc: HP5987A GBRIE(3435.001.100)Pi
Quant Time: 890418 12:44
Injected at: 890418 11:52

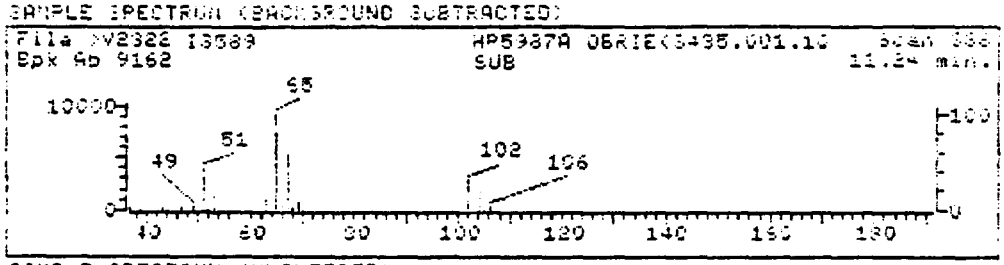
Quant ID File: IDWML::EP
Last Calibration: 890418 11:2[illegible]

Compound No: 13
Compound Name: Chloroform
Scan Number: 316
Retention Time: 10.61 min.
Quant Ion: 83.0
Area: 2736
Concentration: 2.97 NG
Q-value: 99

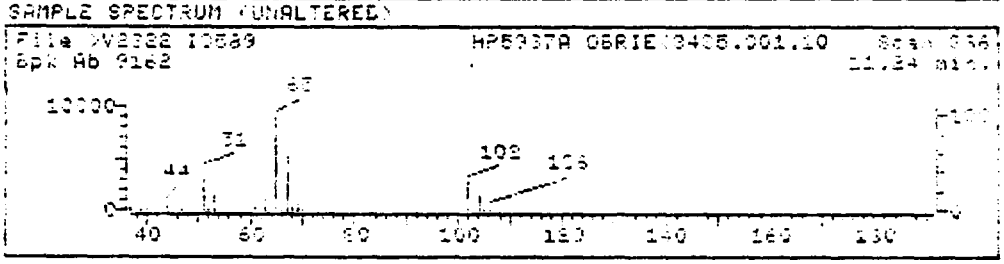
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



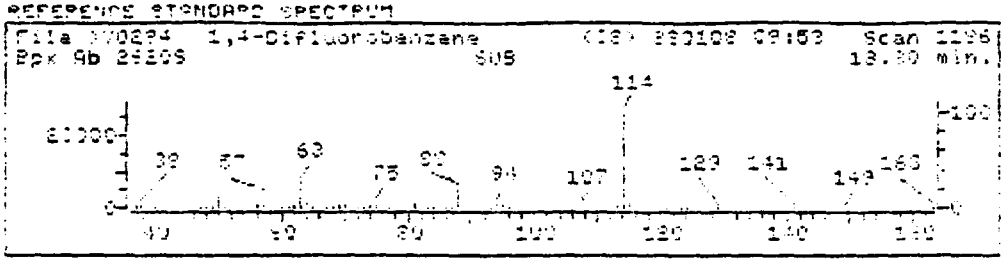
SAMPLE SPECTRUM (UNALTERED)



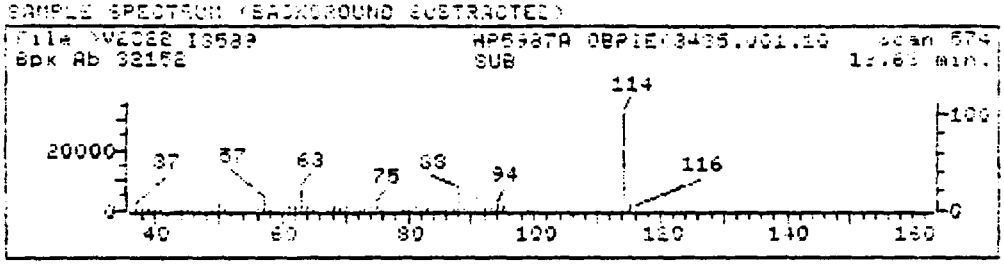
Data File: >V2322::D2 Quant Output File: >V2322::D2
Name: IFSB)
Misc: HP5987A OBRIE(3435.001.10(P1
Quant Time: 890418 12:44 Quant ID File: 10V0L::D)
Injected at: 890418 11:52 Last Calibration: 890418 11:29

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 336
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 101500
Concentration: 195.14 UG
qvalue: 84

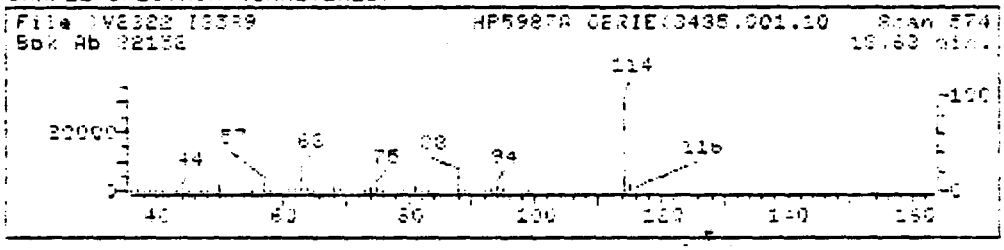
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

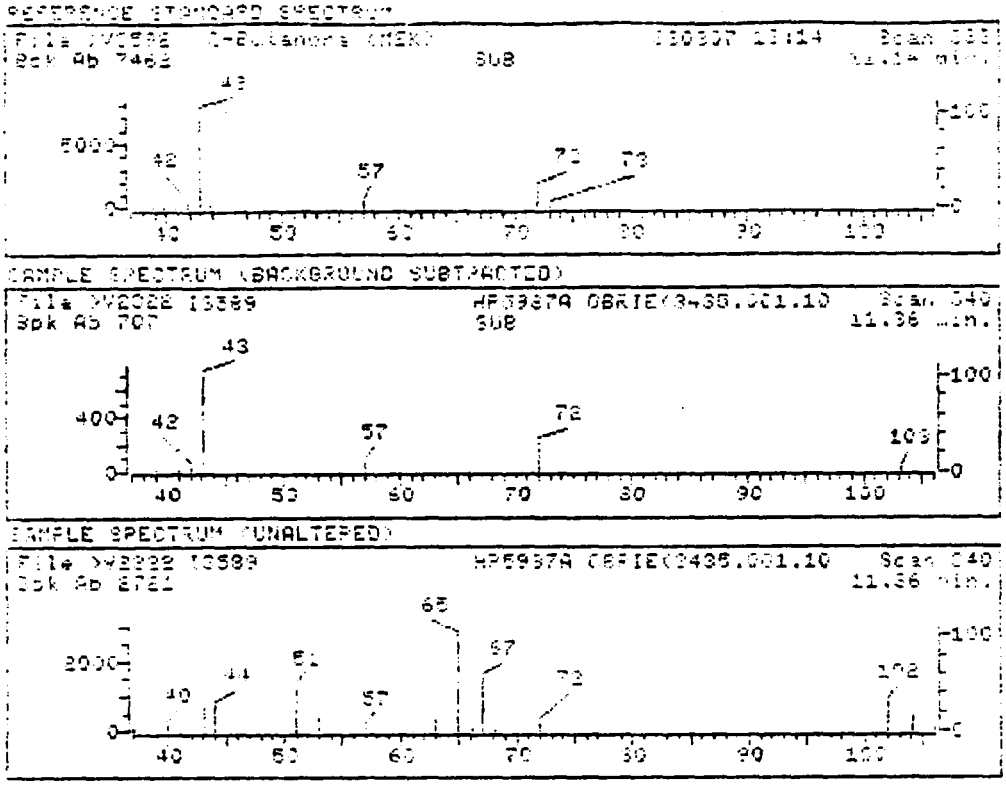


SAMPLE SPECTRUM (UNALTERED)



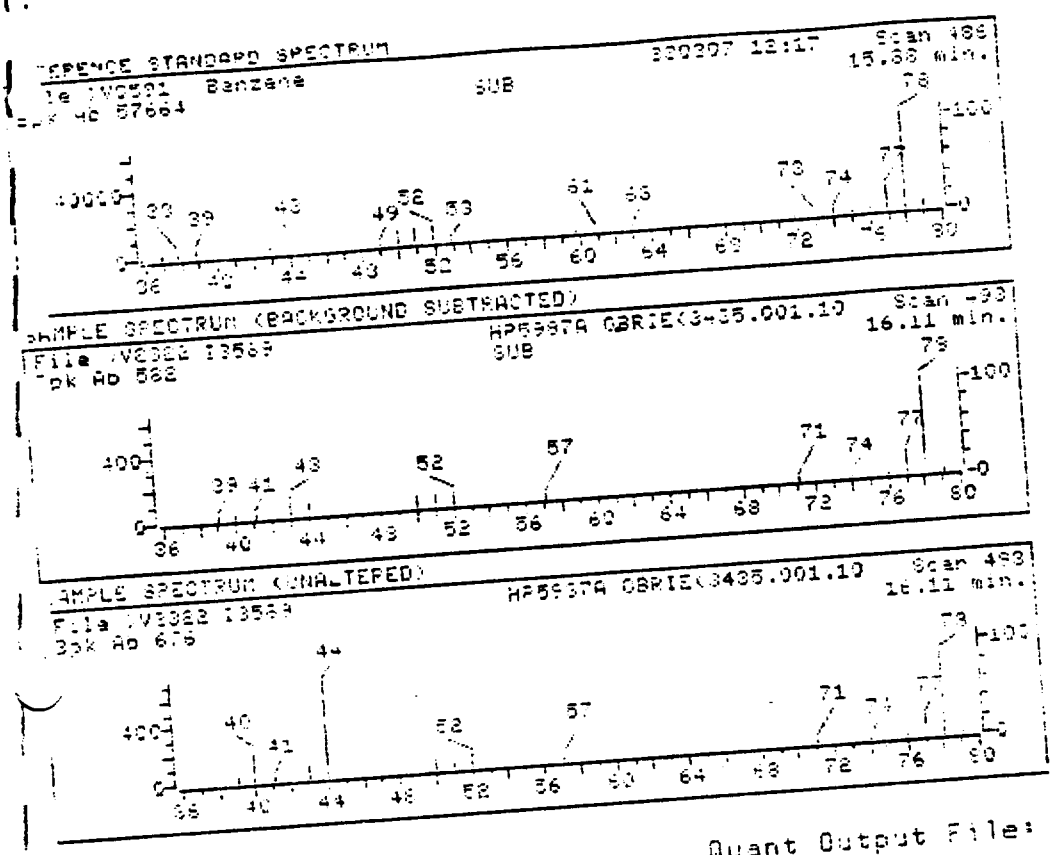
Data File: >V2322::D2 Quant Output File: ^V2322::D1
Name: 13589
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: IDUML::EX
Injected at: 890418 11:52 Last Calibration: 890418 11:29

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 574
Retention Time: 18.63 min.
Quant Ion: 114.0
Area: 372458M
Concentration: 250.00 NG
Purity: 100



Data File: >V2322::D2 Quant Output File: >V2322::D1
Name: I3559
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: IDUML::EX
Injected at: 890418 11:52 Last Calibration: 890418 11:29

Compound No: 19
Compound Name: 2-Butanone
Scan Number: 540
Retention Time: 11.36 min.
Quant Ion: 72.0
Area: 1939
Concentration: 28.98 NG
q-value: 99



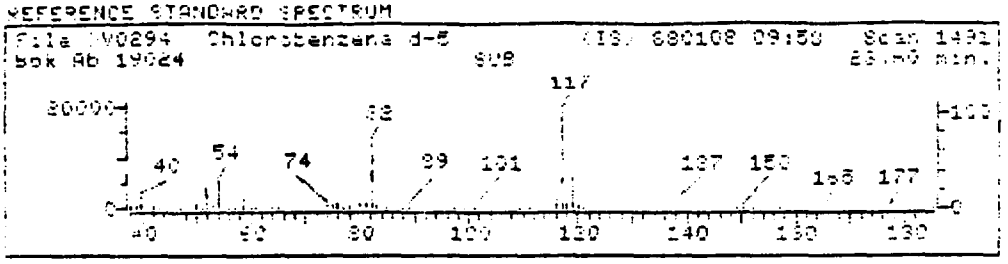
Quant Output File: >V2522::01

Data File: >V2522::02
Name: 55289
Misc: HP59674 OBRIE(3435.001.100)P1
Quant Time: 890418 12:44
Injected at: 890418 11:52

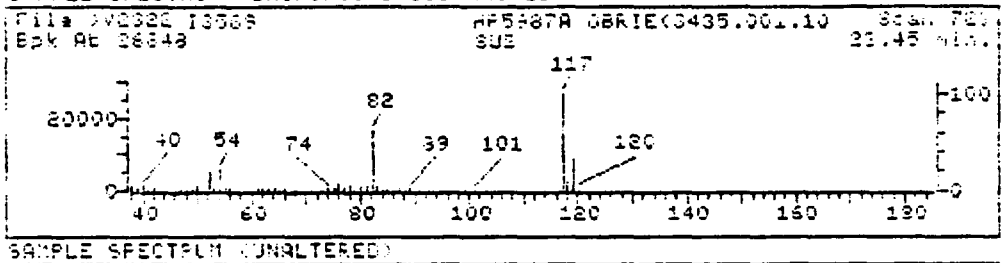
Quant ID File: ID/ML:4EX
Last Calibration: 890418 11:29

Compound No: 27
Compound Name: Benzene
Scan Number: 493
Retention Time: 16.11 min.
Quant Ion: 78.0
Area: 5053
Concentration: 3.85 NG
q-value: 100

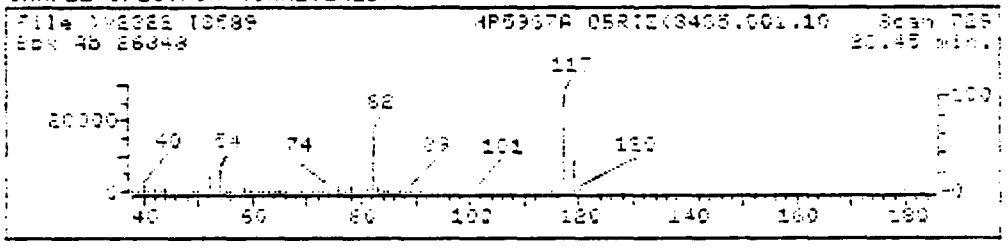
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

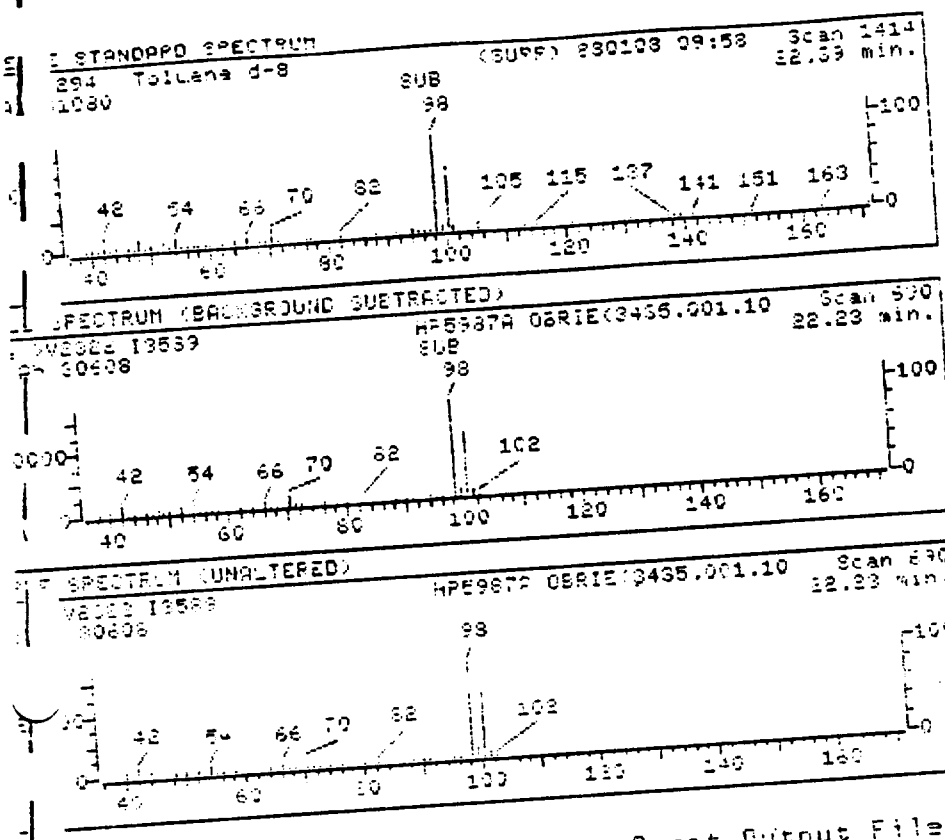


SAMPLE SPECTRUM (UNALTERED)



Data File: >V0322::02 Quant Output File: V0322::01
Name: I3589
Misc: HP5987A 0BRIE(3435.001.100)F1
Quant Time: 890418 12:44 Quant ID File: IDVOL::EA
Injected at: 890418 11:52 Last Calibration: 890418 11:2

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 135601M
Concentration: 250.00 NG
q-value: 97



Quant Output File: ^U2322::01

Data File: >U2322::02

Name: I3539

User: HP5987A OBRIE(3435.001.10)P1

Quant ID File: IDUML:*EY

Quant Time: 890418 12:44

Last Calibration: 890418 11:29

Injected at: 890418 11:52

Compound No: 57

Compound Name: Toluene-d8

Scan Number: 690

Retention Time: 22.23 min.

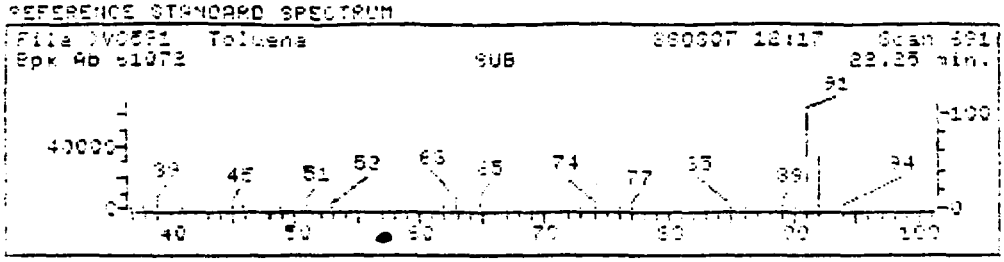
Quant Ion: 98.0

Area: 577189

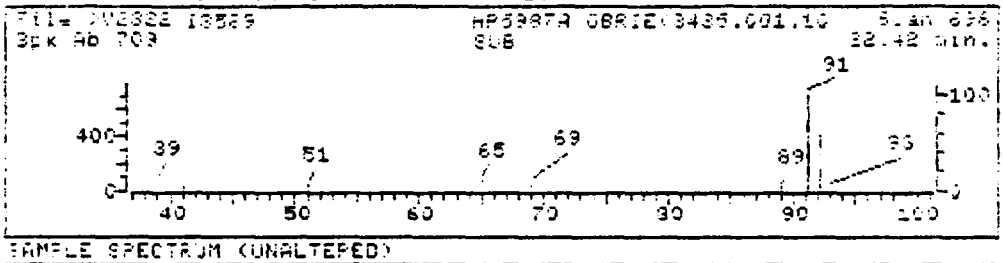
Concentration: 208.74 NG

q-value: 100

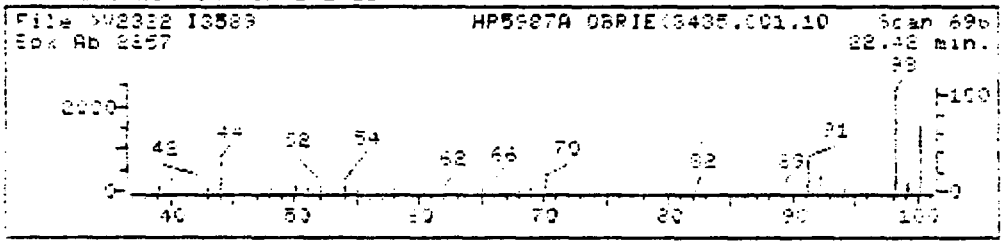
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



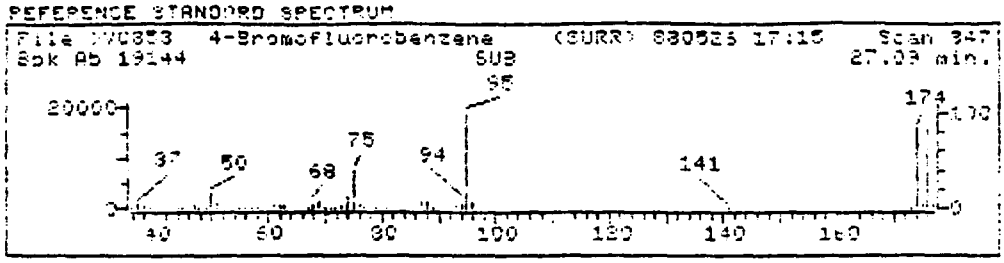
SAMPLE SPECTRUM (UNALTERED)



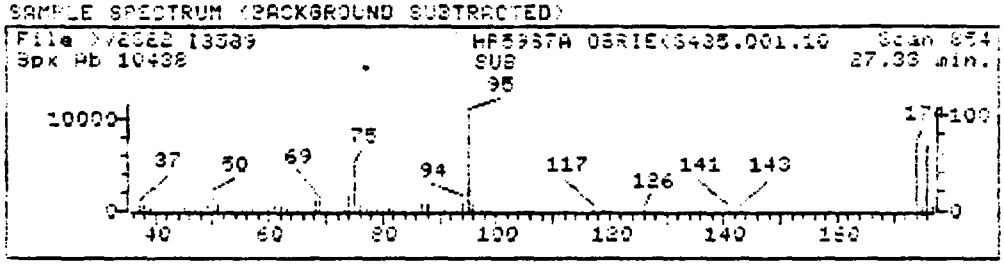
Data File: >V2322::02 Quant Output File: `V2322::D.
Name: I3589
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: ID:NL:.D>
Injected at: 890418 11:52 Last Calibration: 890418 11:09

Compound No: 30
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 92.0
Area: .4962
Concentration: 4.00 NG
q-value: 98

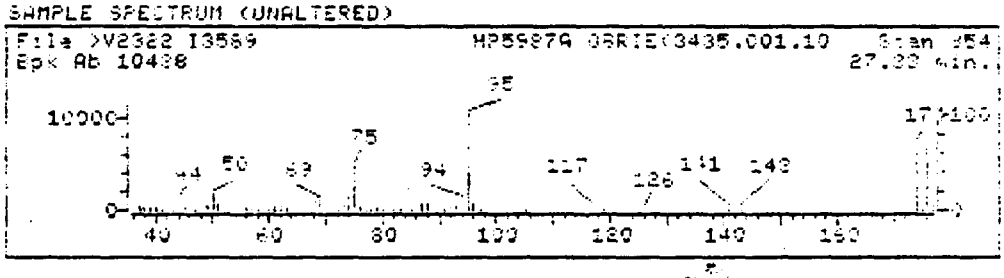
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



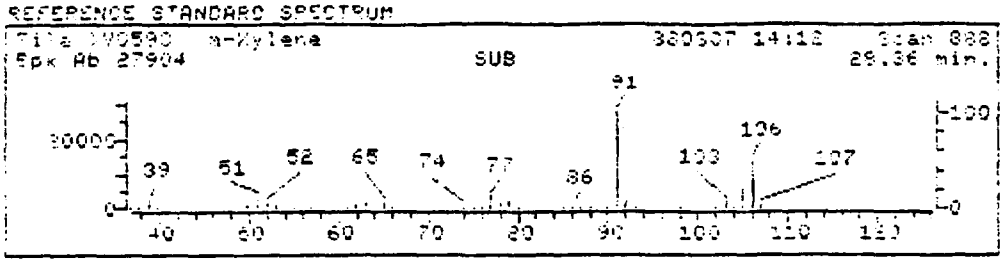
SAMPLE SPECTRUM (UNALTERED)



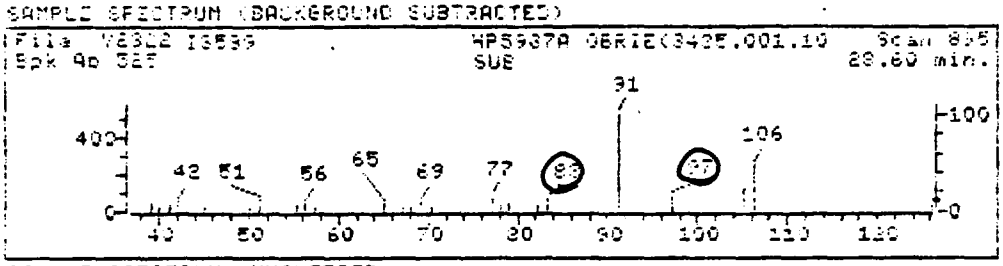
Data File: >V2322::D2 Quant Output File: ^V2322::D1
Name: I3589
Misc: HP5987A 0BRIE(3435.001.100)P1
Quant Time: 890418 12:44 Quant ID File: ID0ML::EX
Injected at: 890418 11:52 Last Calibration: 890418 11:2?

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.33 min.
Quant Ion: 95.0
Area: 177915
Concentration: 207.90 NG
q-value: 84

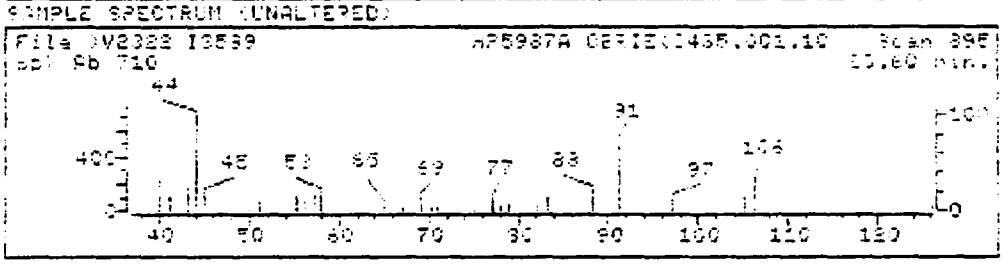
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

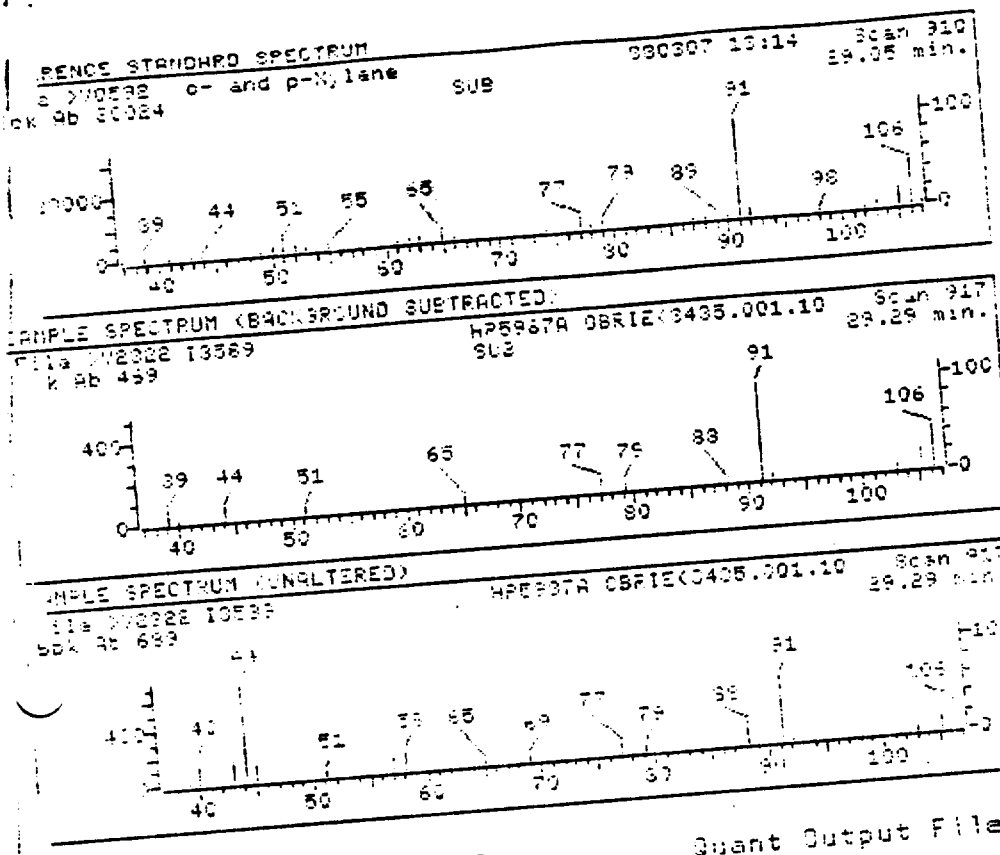


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2322::D2 Quant Output File: ^V2322::D1
Name: 13589
Misc: HP5987A OBRIE(3435.001.10)P1
Quant Time: 890418 12:44 Quant ID File: 10^ML::QX
Injected at: 890418 11:52 Last Calibration: 890418 11:2?

Compound No: 45
Compound Name: m-Xylene
Scan Number: 895
Retention Time: 28.60 min
Quant Ion: 106.0
Area: 4235
Concentration: 4.46 NG
q-value: 99



Data File: >U2322::02 Quant Output File: >U2322::01

Name: I350"

Misc: HP5987A OBRIE(3435.001.100)P1

Quant ID File: 100ML::EX

Quant Time: 890413 12:41 Last Calibration: 890413 11:09

Injected at: 890413 11:52

Compound No: 44

Compound Name: Xylene (total)

Scan Number: 917

Retention Time: 29.29 min.

Quant Ion: 106.0

Area: 4362

Concentration: 5.70 NG

q-value: 99

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890413 14:13
Output File: ^V2523::D1 Injected at: 890418 15:22
Data File: >V2523::D2 Dilution Factor: 1.00000
Name: I5590
Misc: HP5987A OBRIE(3455.001.100)P1

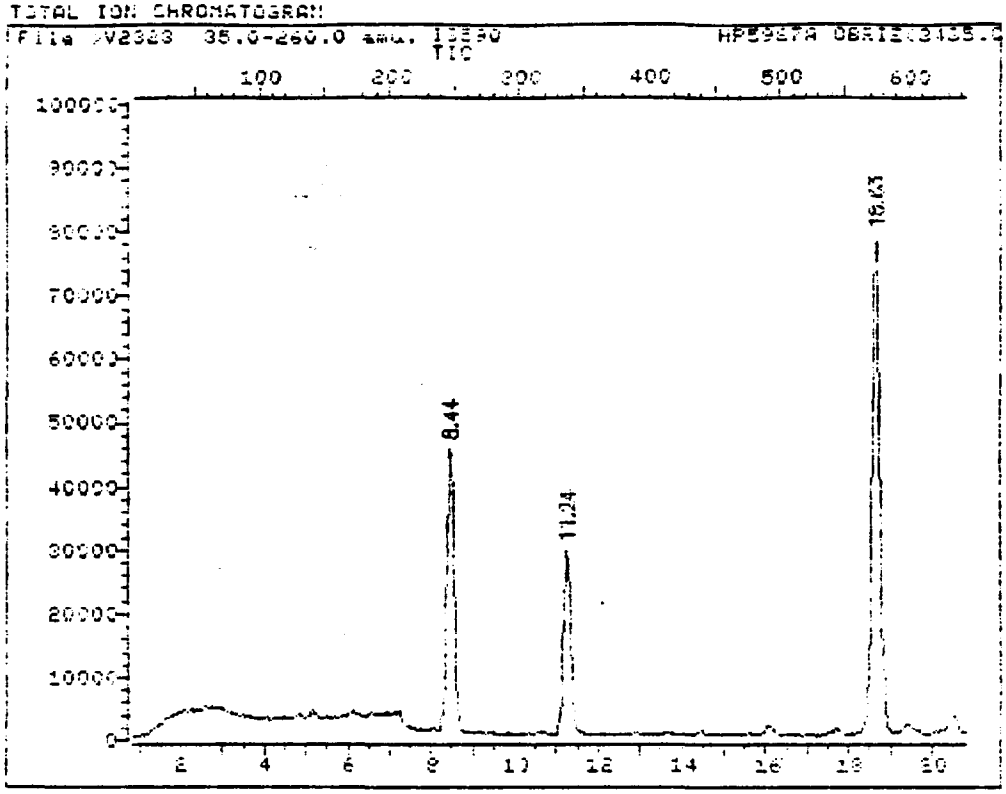
ID File: IDUML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.44	128.0	82495	250.00	NG	93
5)	Methylene Chloride	5.15	84.0	2591	4.67	NG	90
7)	Acetone	6.11	43.0	6042	34.72	NG	85
9)	Chloroform	10.65	83.0	2728	3.00	NG	94
15)	1,2-Dichloroethane-d4	11.24	65.0	106824	211.95	NG	87
31)	*1,4-Difluorobenzene	18.63	114.0	589015	250.00	NG	100
12)	2-Butanone	11.36	72.0	1922	27.96	NG	94
32)	*Chlorobenzene-d5	18.48	117.0	536240	250.00	NG	96
~~[illegible]~~	~~4-Methyl-2-pentanone~~	~~16.11~~	~~[illegible]~~	~~21[illegible]~~	~~[illegible]~~	~~NG~~	~~[illegible]~~
~~[illegible]~~	~~Tetrachloroethene~~	~~21.21~~	~~164.0~~	~~1[illegible]~~	~~[illegible]~~	~~NG~~	~~[illegible]~~
37)	Toluene-d8	22.24	98.0	384990M	212.65	NG	100
38)	Toluene	22.42	92.0	54057	47.50	NG	98
~~39)~~	~~Chlorobenzene~~	~~23.20~~	~~112.0~~	~~10[illegible]~~	~~[illegible]~~	~~NG~~	~~[illegible]~~
40)	Ethylbenzene	25.31	106.0	59125	72.05	NG	91
41)	Bromofluorobenzene	27.34	95.0	191009M	222.67	NG	96
~~[illegible]~~	~~Styrene~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
45)	m-Xylene	28.61	106.0	163836M	178.05	NG	91
44)	Xylene (total)	29.33	106.0	189951M	248.79	NG	93

* Compound is ISTD

$$\text{Total Xylene} = \frac{(163836 + 189951)}{336240} \times \frac{250}{0.70428} = 373.50 \text{ NG}$$

TOTAL ION CHROMATOGRAM

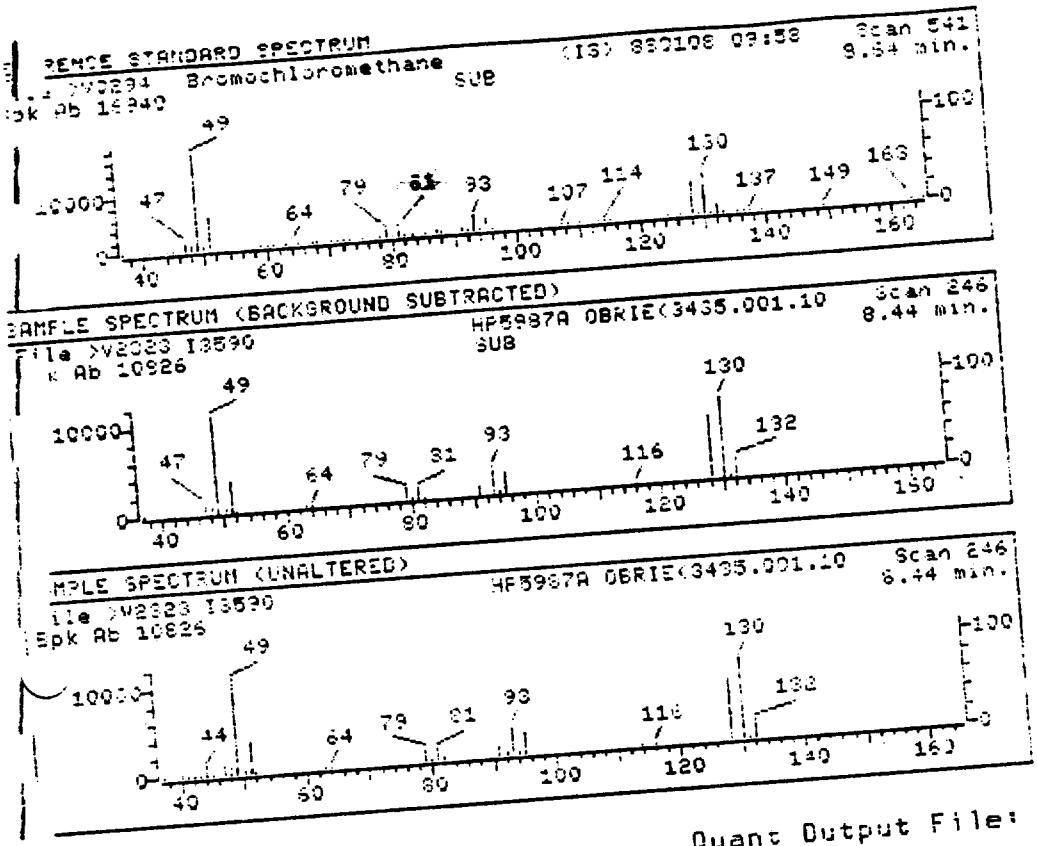


Data File: :V2323::D2 Quant Output File: ^V2323::D1
Name: I3590
Misc: HP5987A OBRIE(3435.001.100:P1

Id File: IDUTL::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

Operator ID: KAREN
Quant Time: 890418 14:12
Injected at: 890418 13:22

TIC page 1 of 2

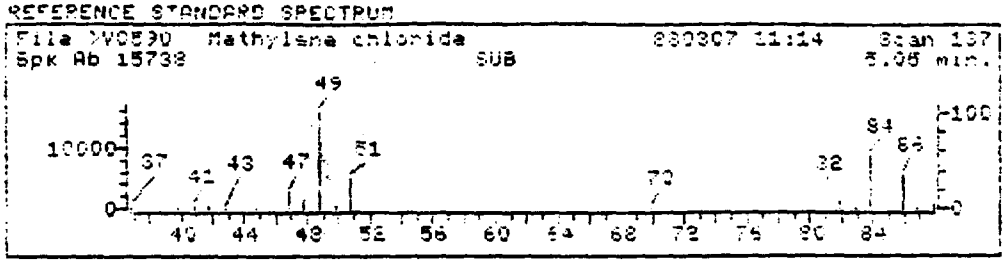


Data File: >V2323::D2
Name: I3590
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 14:12
Injected at: 890418 13:22

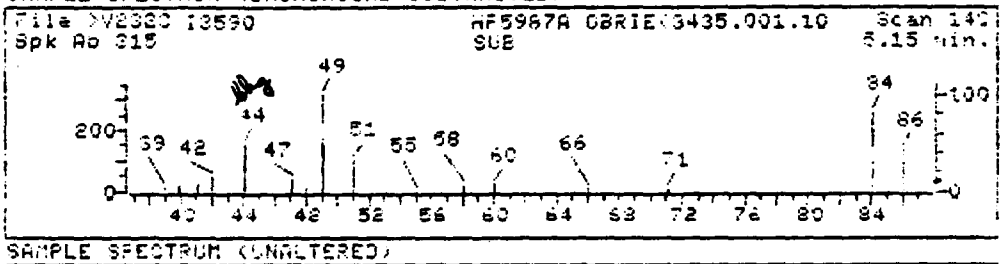
Quant Output File: ^V2323::01
Quant ID File: IDUML::EX
Last Calibration: 890418 11:29

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 246
Retention Time: 8.44 min.
Quant Ion: 129.0
Area: 82495
Concentration: 250.00 NG
q-value: 98

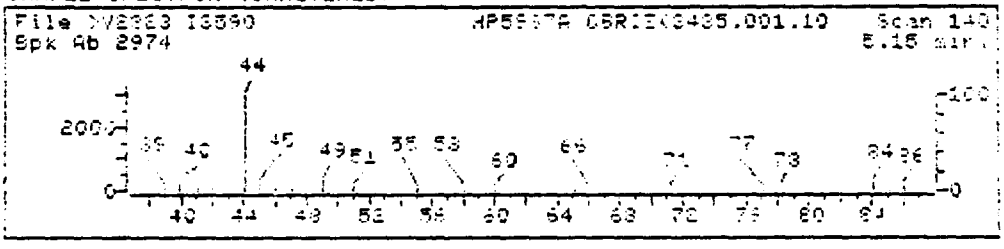
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

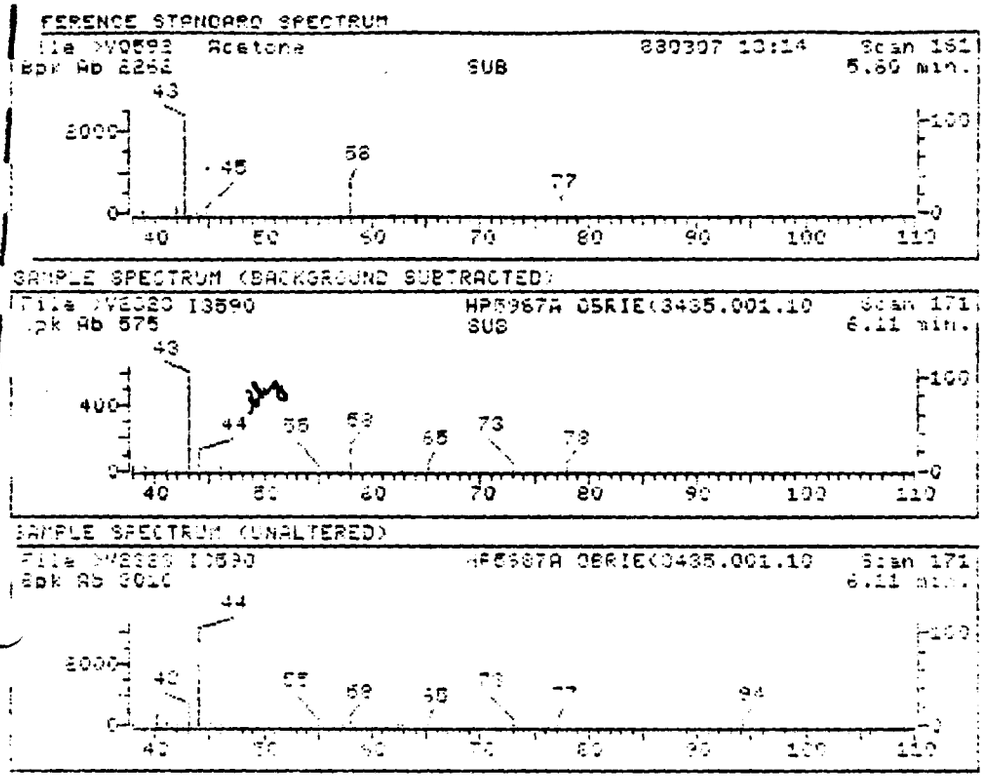


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2323::D2 Quant Output File: ^V2323::D1
Name: I3590
File: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant IS File: ISVML::SI
Injected at: 890418 13:22 Last Calibration: 890418 11:19

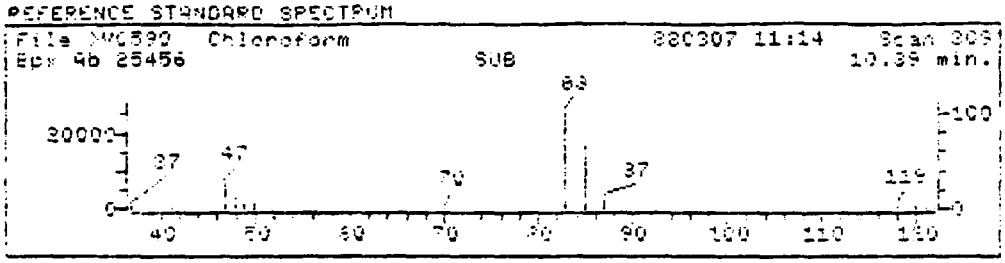
Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 140
Retention Time: 5.15 min.
Quant Ion: 84.0
Area: 2591
Concentration: 4.69 NG
q-value: 88



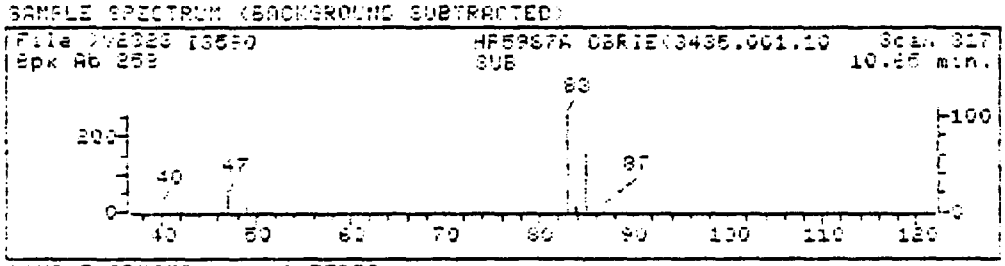
Data File: >V2323::02 Quant Output File: ^V2323::01
Name: 13590
Misc: HP5987A 05RIE(3435.001.10)01
Quant Time: 890418 14:12 Quant ID File: IOUML::EX
Injected at: 890418 13:22 Last Calibration: 890418 11:29

Compound No 7
Compound Name: Acetone
Scan Number: 171
Retention Time: 6.11 min.
Quant Ion: 43 C
Area: 6042
Concentration: 34.70 NG
q-value: 83

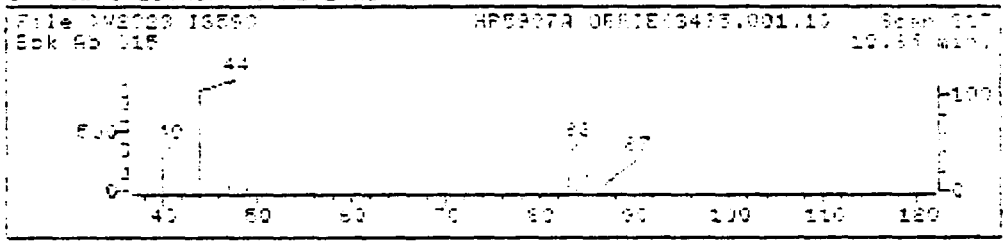
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



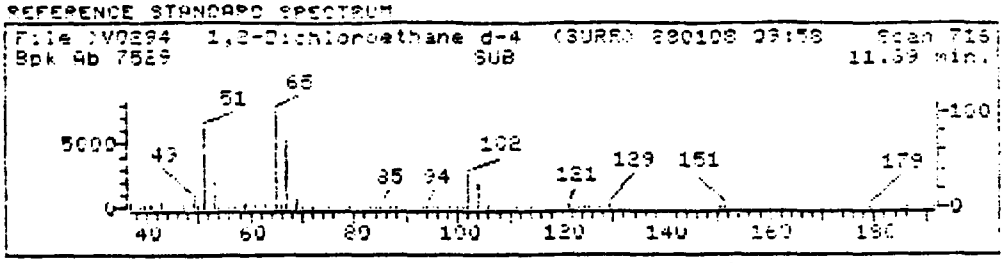
SAMPLE SPECTRUM (UNALTERED)



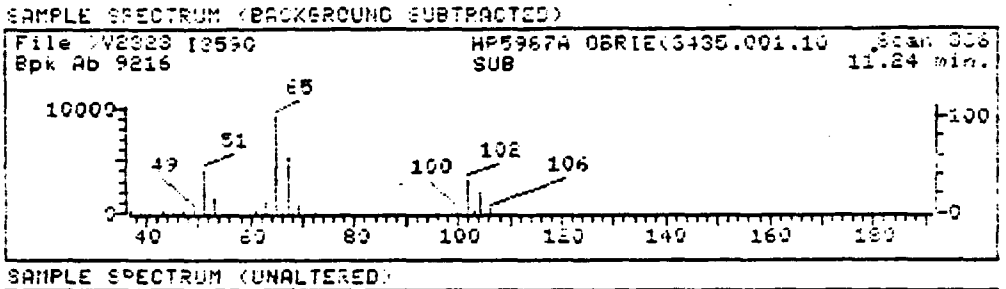
Data File: JW2323::D1 Quant Output File: JW2325::D1
Name: 1990
Misc: HP5987A GBRIE(F435.001.100)P1
Quant Time: 890413 14:12 Quant ID File: IDUNL::EX
Injected at: 890413 13:22 Last Calibration: 890413 11:2

Compound no: 13
Compound Name: Chloroform
Scan Number: 317
Retention Time: 10.45 min.
Quant Ion: 83.0
Area: 2723
Concentration: 5.00 UG
Value: 94

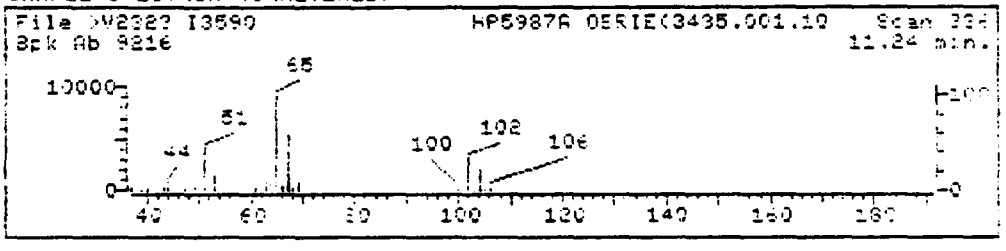
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



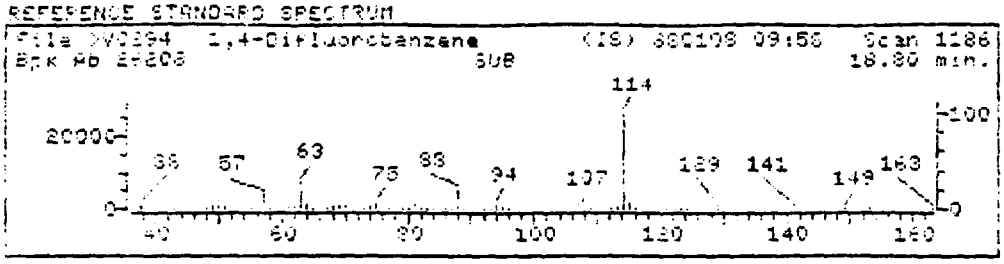
SAMPLE SPECTRUM (UNALTERED)



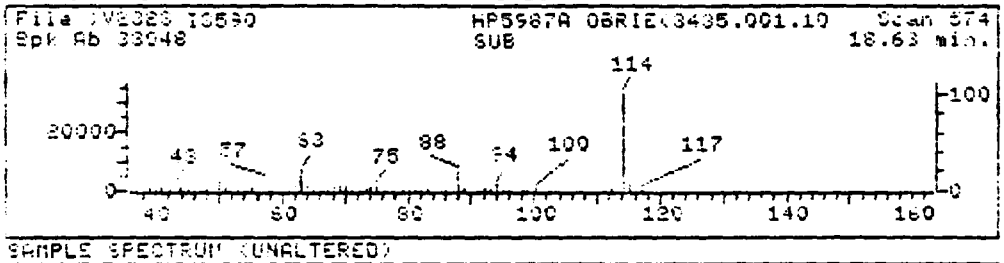
Data File: >V2323::D2 Quant Output File: ^V2323::01
Name: I3590
Misc: HP5987A OBRIE(3435.001.10)P1-
Quant Time: 890418 14:12 Quant ID File: TD\ML::EX
Injected at: 890418 13:22 Last Calibration: 890413 11:29

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 336
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 106824
Concentration: 211.95 NG
q-value: 87

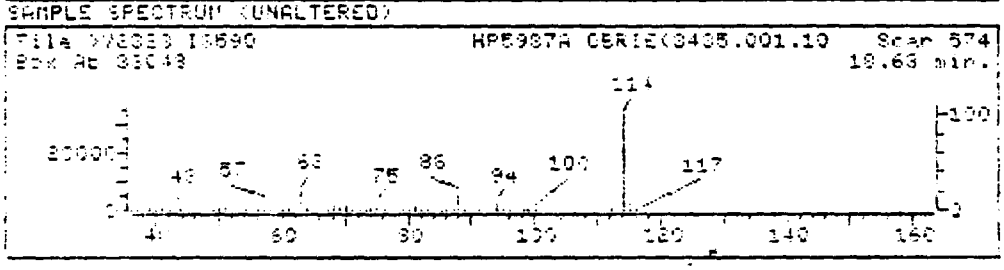
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

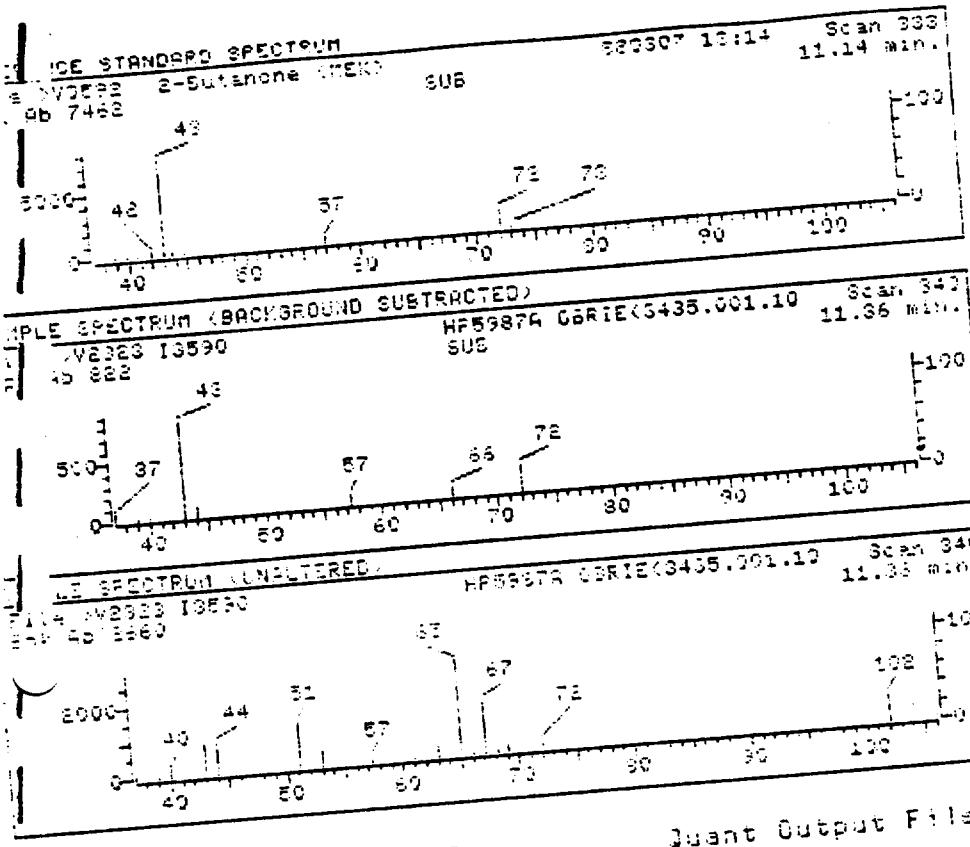


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2323::D2 Quant Output File: ^V2323::D1
Name: I0590
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDUML::CV
Injected at: 890418 13:22 Last Calibration: 890418 11:2

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 574
Retention Time: 18.63 min.
Quant Ion: 114.0
Area: 539015
Concentration: 250.00 NG
Qvalue: 100

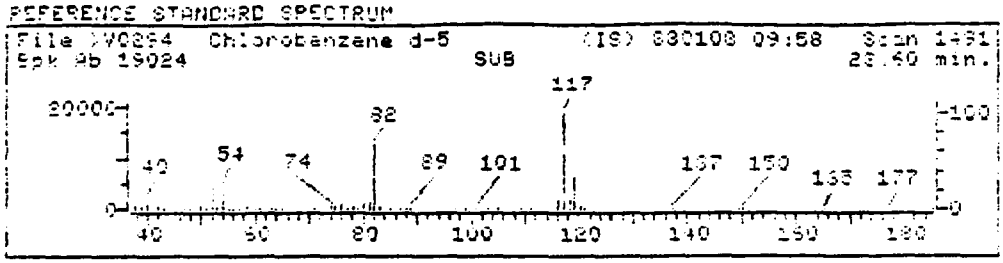


Data File: >V2323::02
Name: I3590
Misc: HP5987A GCRIE(5435.001.100)P1
Quant Time: 890418 14:12
Injected at: 890418 15:22

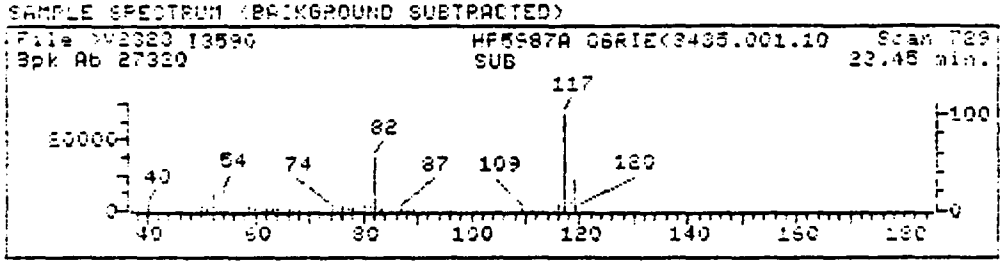
Quant Output File: ^V2323::01
Quant ID File: ID:ML:MEK
Last Calibration: 890418 11:29

Compound No: 10.
Compound Name: 2-Butanone
Scan Number: 340
Retention Time: 11.36 min.
Quant Ion: 72.0
Area: 1922
Concentration: 27.96 NG
q-value: 94

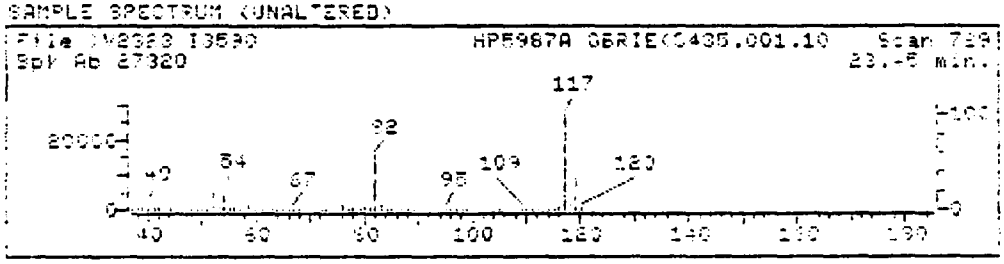
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

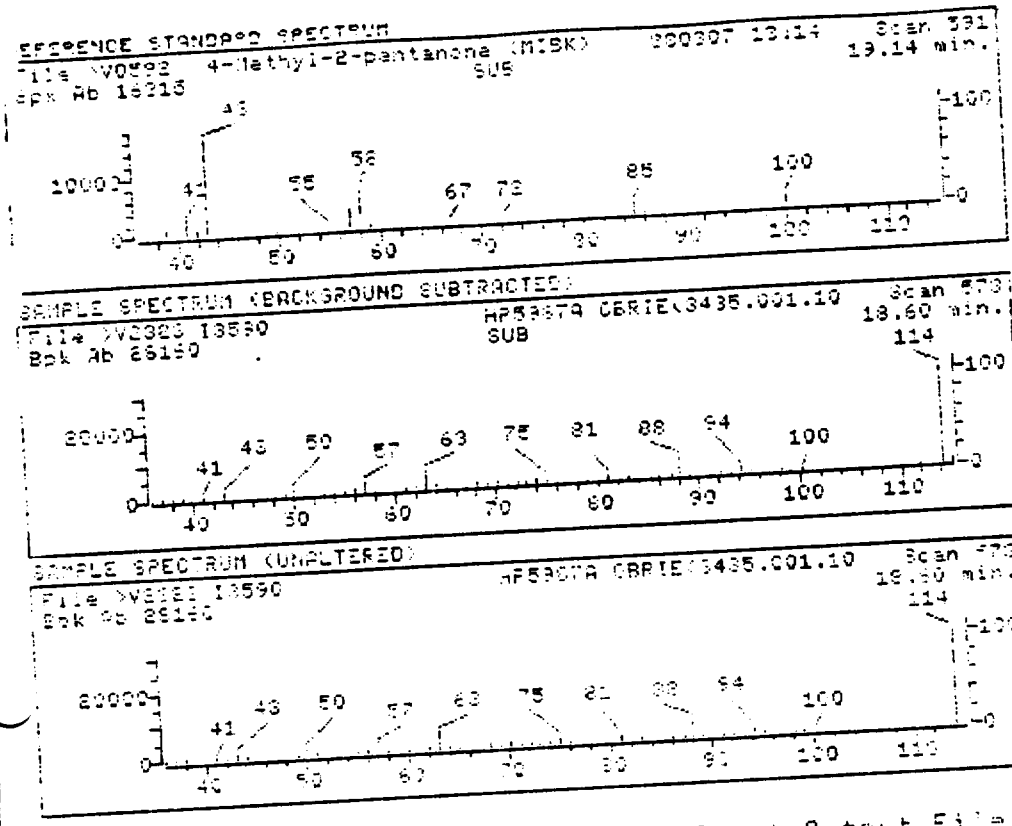


SAMPLE SPECTRUM (UNALTERED)



Data File: >V0323::D2 Quant Output File: ^V0323::D.
Name: [illegible]
Text: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDVML::ES
Injected at: 890418 13:22 Last Calibration: 890418 11:0[illegible]

Compound No: 52 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 356240
Concentration: 250.00 NG
Value: 9[illegible]

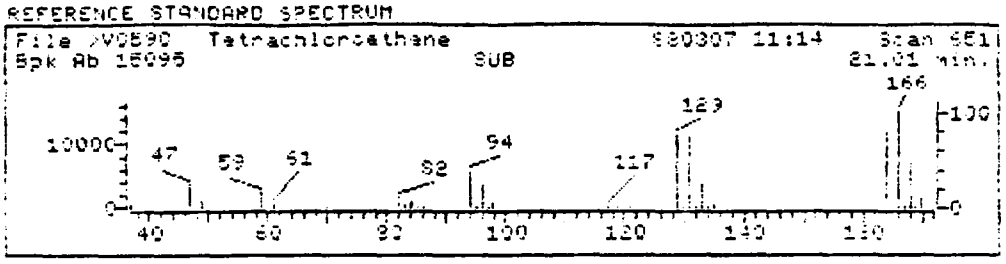


Data File: >V0323::02 Quant Output File: ^V0323::01

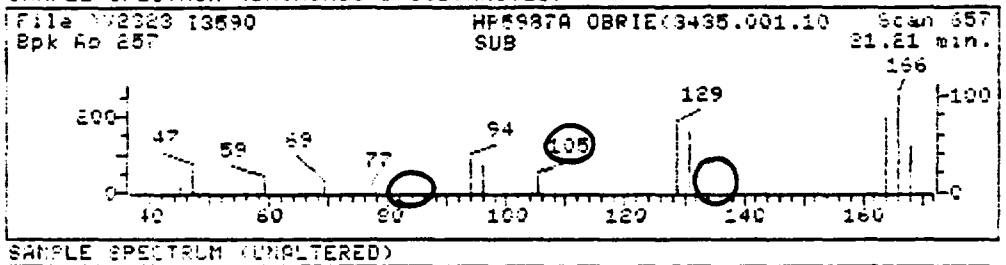
Name: 1350
Misc: HP5987A CBRIE(3435.001.100:F1
Quant Time: 890418 14:12 Quant ID File: IQUML::EX
Injected at: 890418 13:22 Last Calibration: 890418 11:27

Compound No: 33
Compound Name: 4-Methyl-2-pentanone
Scan Number: 573
Retention Time: 18.60 min.
Quant Ion: 43.0
Area: 217.5M
Concentration: 59.12 NG
q-value: 55

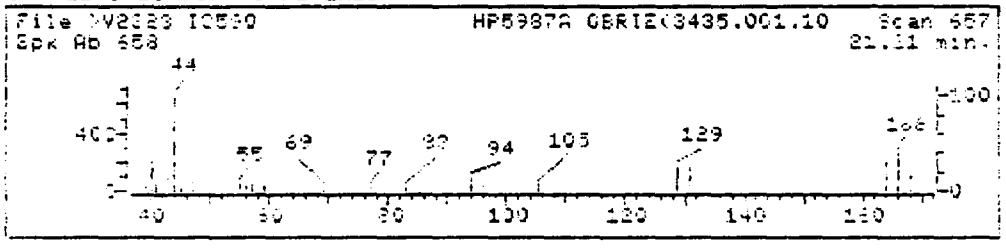
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



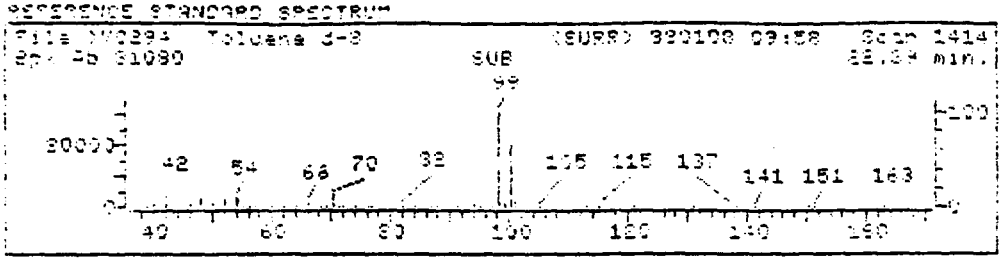
SAMPLE SPECTRUM (UNALTERED)



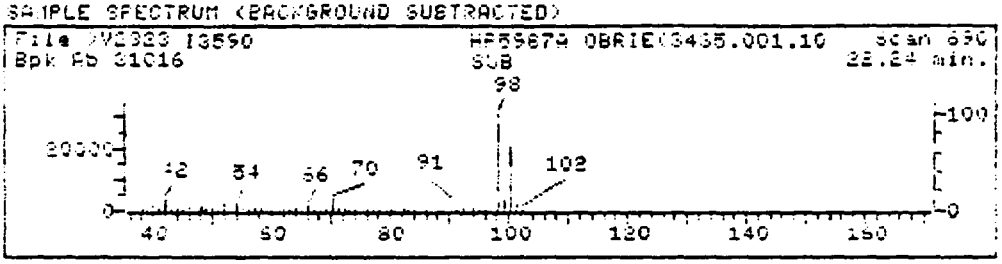
Data File: >V2323::D2 Quant Output File: >V2323::D1
Name: I3590
Misc: HP5987A QBRIE(3435.001.100)=1
Quant Time: 890418 14:12 Quant IS File: 100ML::ES
Injected at: 890418 15:22 Last Calibration: 890418 11:20

Compound No: 30
Compound Name: Tetrachloroethene
Scan Number: 657
Retention Time: 21.21 min.
Quant Ion: 164.0
Area: 1920
Concentration: 4.25 NG
q-value: 93

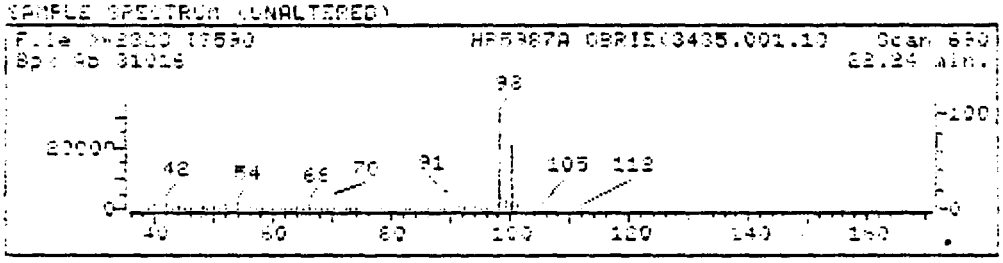
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



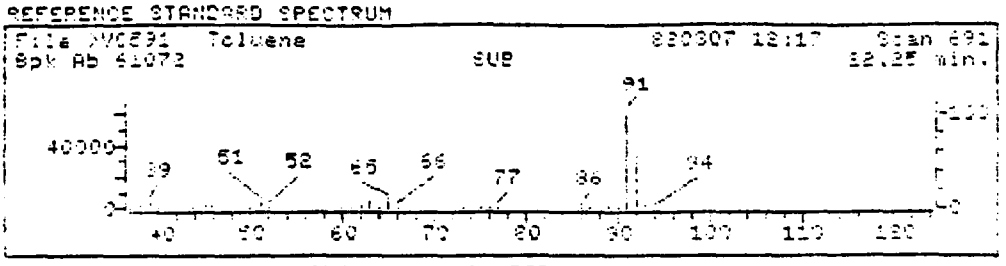
SAMPLE SPECTRUM (UNALTERED)



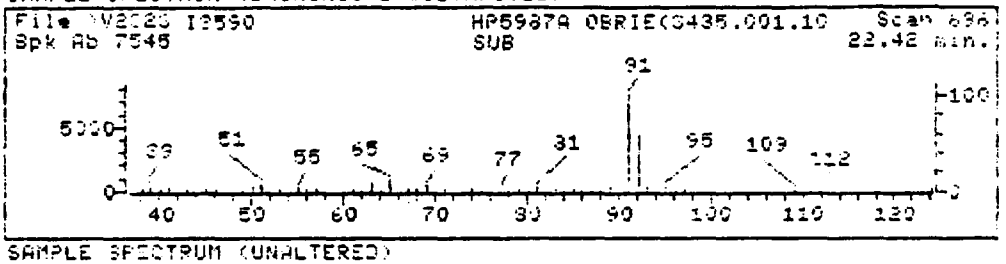
Data File: >V2323::D2 Quant Output File: ^V2323::Q1
Name: 13590
Misc: HP5987A OBRIE(5435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDUML::EX
Injected at: 890418 13:22 Last Calibration: 890418 11:27

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.24 min.
Quant Ion: 98.0
Area: 1249904
Concentration: 210.65 NG
q-value: 100

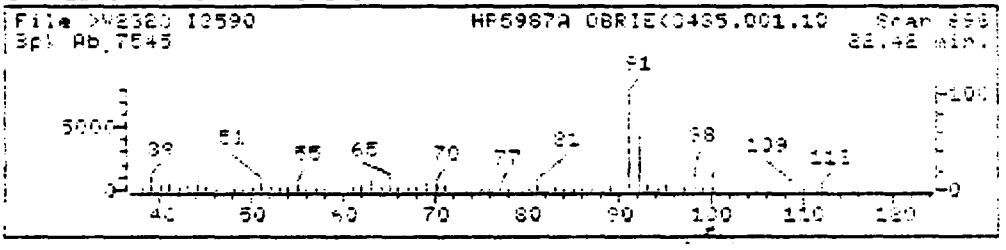
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

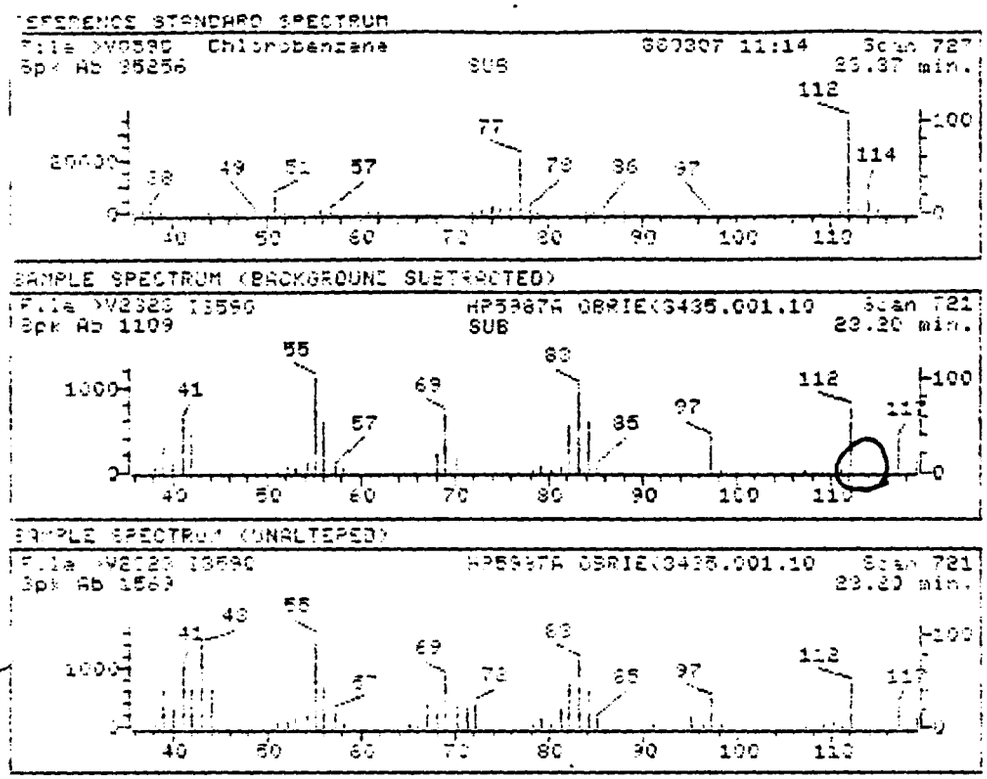


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2323::D2 Quant Output File: ^V2323::D1
Name: I3590
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDUL::C
Injected at: 890418 13:22 Last Calibration: 890418 11:2

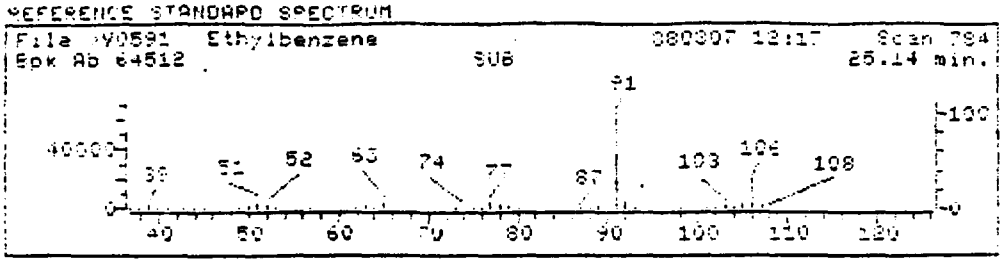
Compound No: 38
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 91.0
Area: 34037
Concentration: 47.30 NG
q-value: 98



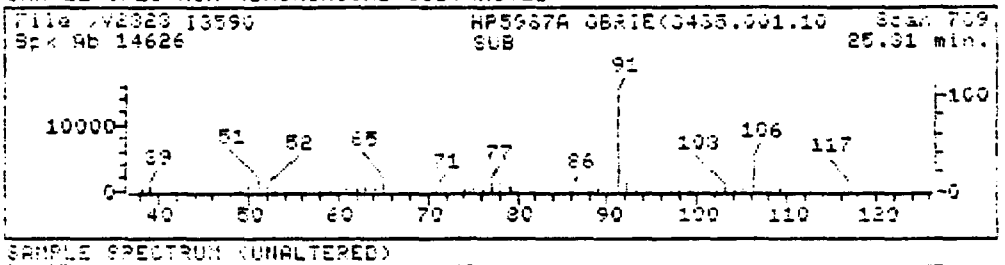
Data File: >V2323::D2 Quant Output File: ^V2323::D1
Name: I3590
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDUML::EX
Injected at: 890418 13:22 Last Calibration: 890418 11:29

Compound No: 39
Compound Name: Chlorobenzene
Scan Number: 721
Retention Time: 23.20 min.
Quant Ion: 112.0
Area: 10678M
Concentration: 7.73 NG
Qualue: 85

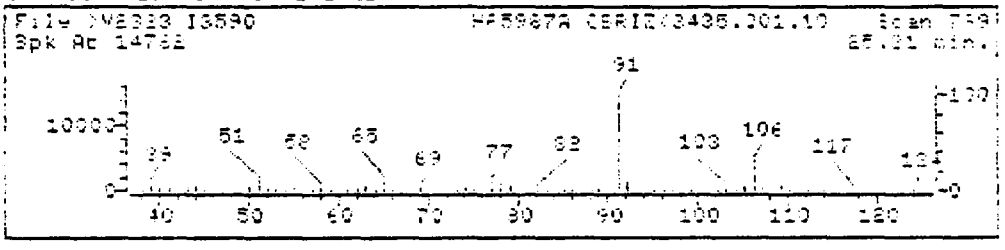
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

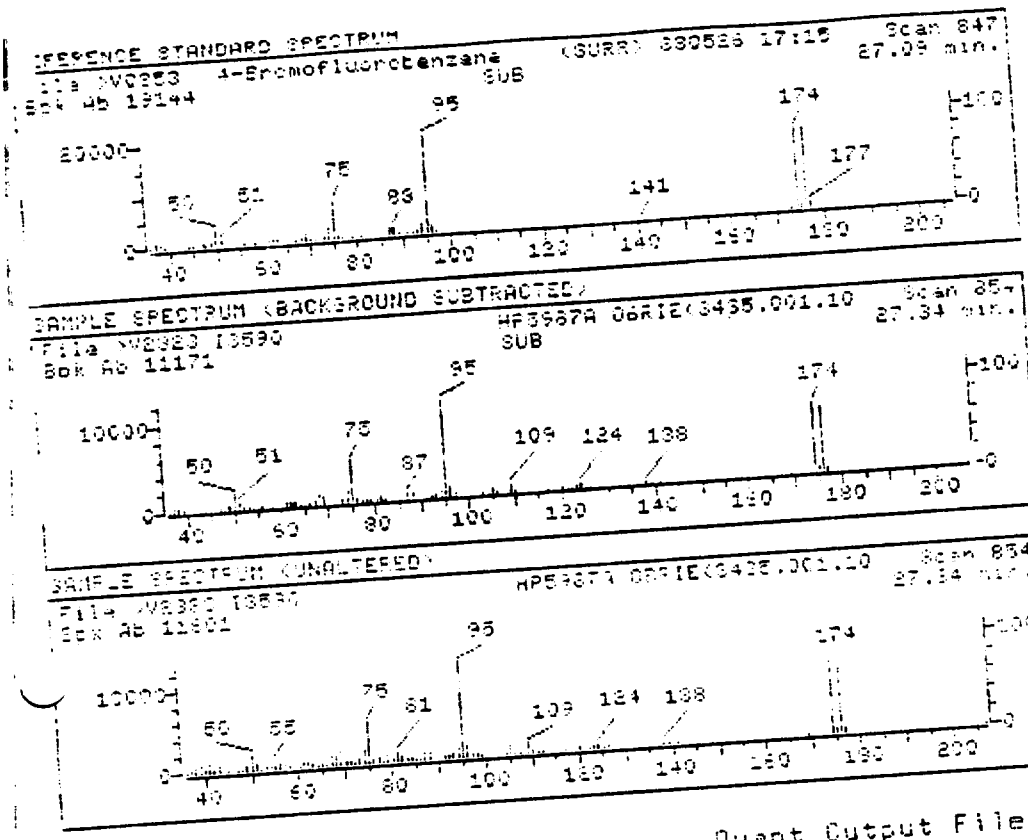


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2323::D2 Quant Output File: 'V2323::D1
Name: I3590
Misc: HP5987A'QBRIE(5435.001.100)P1
Quant Time: 990418 14:12 Quant ID File: IDUML::EX
Injected at: 990418 13:22 Last Calibration: 990418 13:29

Compound No: 40
Compound Name: Ethylbenzene
Scan Number: 709
Retention Time: 25.31 min.
Quant Ion: 106.0
Area: 59185
Concentration: 92.07 NG
q-value: 91



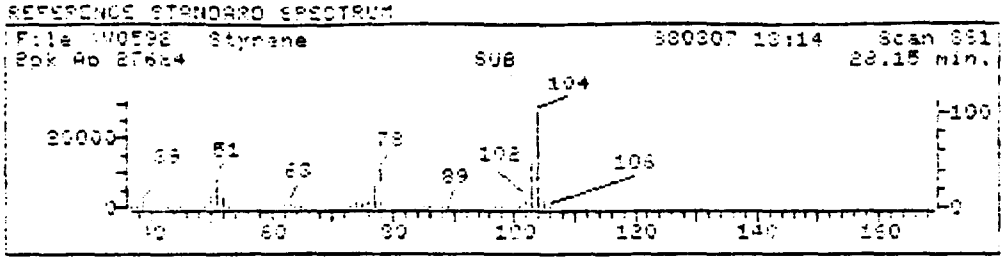
Data File: >U2325::02

Quant Output File: ^U2325::01

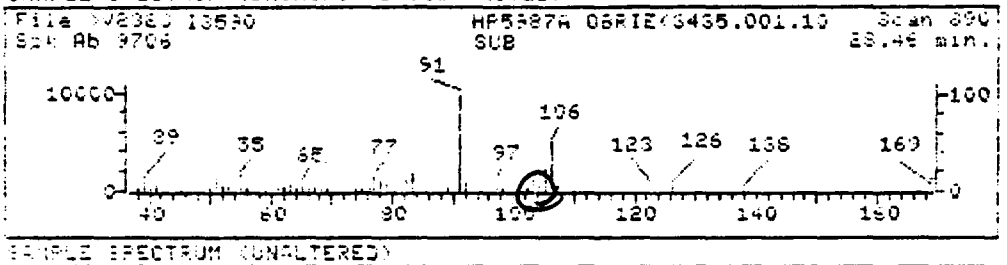
Name: 13590
Misc: HP5987A 08RIE(3435.001.100)P1
Quant ID File: 100ML.::C6
Quant Time: 890418 14:12
Last Calibration: 890418 11:29
Injected at: 890418 13:22

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 191009M
Concentration: 222.67 NG
q-value: 86

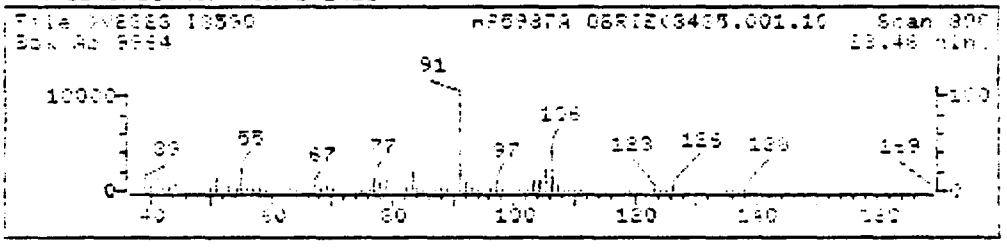
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



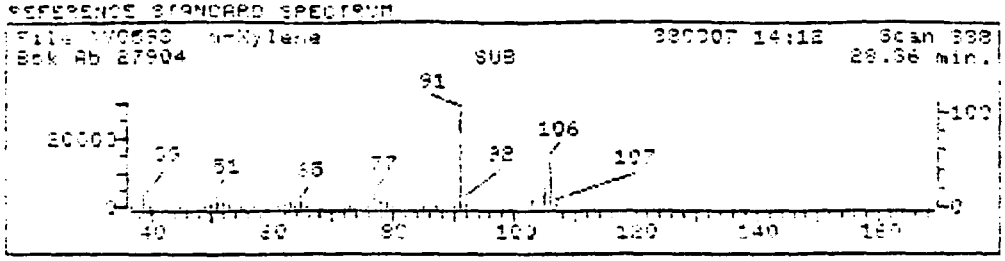
SAMPLE SPECTRUM (UNALTERED)



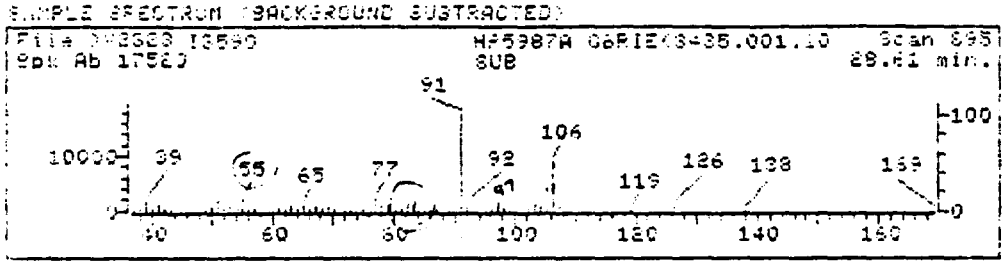
Data File: :V2383::D2 Quant Output File: :V2383::D1
Name: 13590
Misc: HP5987A 08RIE(3435.001.100)P1
Quant Time: 880418 14:12 Quant ID File: IDUML::ES
Injected at: 880418 13:22 Last Calibration: 880418 11:27

Compound No: 42
Compound Name: Styrene
Scan Number: 890
Retention Time: 28.46 min.
Quant Ion: 104.0
Area: 24509M
Concentration: 16.77 NG
q-value: 42

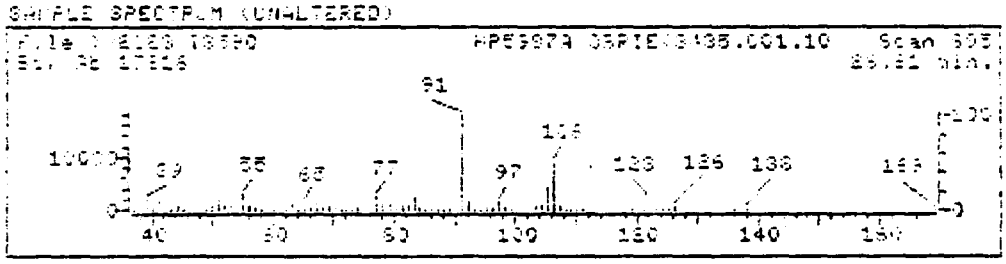
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



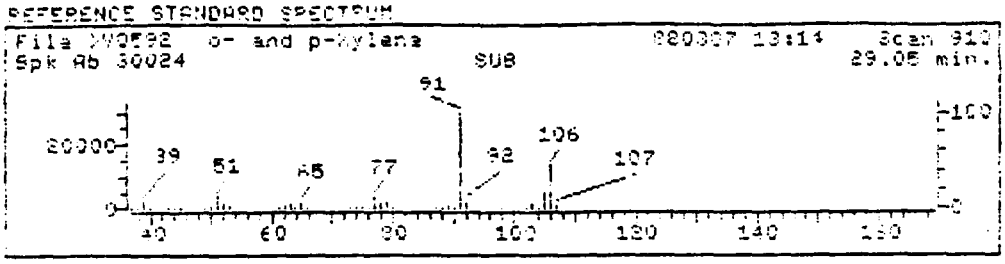
SAMPLE SPECTRUM (UNALTERED)



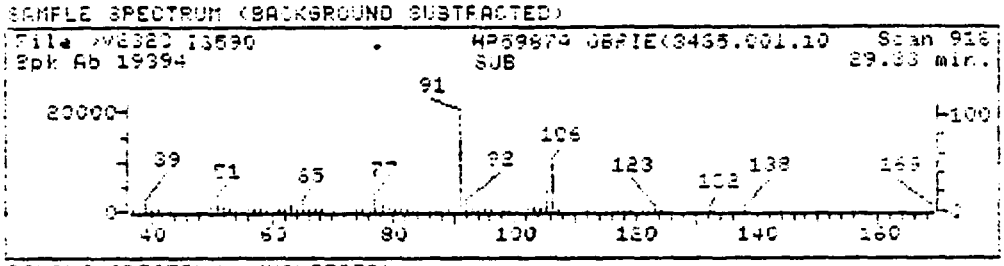
Data File: >V2323::D2 Quant Output File: ^V2323::D1
Name: 13590
Misc: HP5987A GCMSIE(3435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDVML::EX
Injected at: 890418 13:22 Last Calibration: 890418 11:29

Compound No: 45
Compound Name: m-Xylene
Scan Number: 695
Retention Time: 28.61 min.
Quant Ion: 106.0
Area: 1e+06M
Concentration: 175.03 NG
q-value: 92

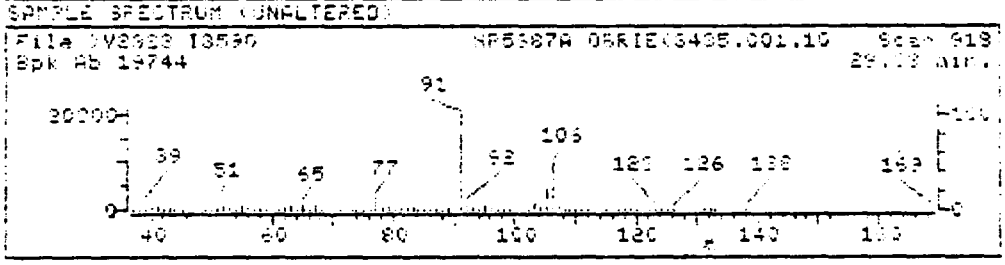
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

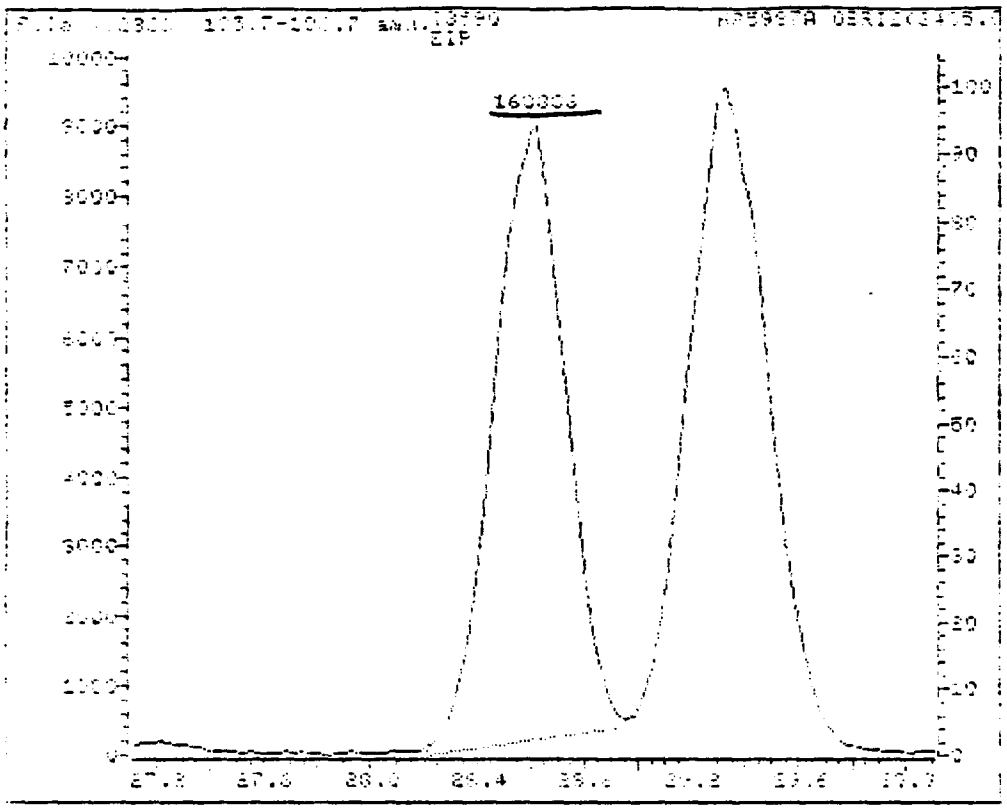


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2525::D2 Quant Output File: ^V2525::D1
Name: 1350
Misc: HP5987A 08RIE(5435.001.100)P1
Quant Time: 890418 14:12 Quant ID File: IDVML::EA
Injected at: 890418 13:22 Last Calibration: 890418 11:2

Compound No: 44
Compound Name: Xylene (total)
Scan Number: 710
Retention Time: 29.33 min.
Quant Ion: 106.0
Area: 189971M
Concentration: 248.78 NG
q-value: 92



Data File: AV2323::D2 Quant Output File: AV2323::D1
Name: 13590
Misc: mP5987A CBRIE(5435.001.100,P1
Quant Time: 890418.14:12 Quant ID File: ID:NL::E1
Injected at: 890418 13:22 Last Calibration: 890418 11:29

Compound No: 43
Compound Name: m-Xylene
Scan Number: 849
Retention Time: 28.61 min.
Quant Ion: 106.0
Area: 160304
Concentration: 173.03 NG
Qualual: 92

This report was produced by QAREA on: 890423 15:31

; data file header from : >V2323

Sample: I3590 Operator: KAREN MS 4/15/89 13:22
Rec : HP5987A OBRIE(3435.001.100)P1
Sys. #: 1 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: CLPVOA Tuning file: MT8718 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 280

Chromatographic temperatures :	45.	220.	0.	0	0
Chromatographic times, min. :	5.0	15.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

>V2323 I3590 HP5987A OBRIE(3435.001.100)P1
35.0| 260.0 CLP ADC TIC
Pslope: .01 Area Reject: 53040. Max Peaks: 10 Bunching: 1
Nslope: -.01 Results File IV2323 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	24.88	761	775	798	11265	806634	512958	23.07	5.90
2	26.65	819	832	836	9130	479502	185444	8.34	2.13
3	28.96	836	842	878	10481	1454096	515035	23.62	6.04
4	30.39	936	952	956	13127	965057	430060	19.35	4.95
5	30.67	956	961	986	17805	1351093	457366	20.59	5.27
6	31.92	986	1001	1017	23097	1594191	623127	28.03	7.17
7	33.41	1023	1049	1066	59000	3520417	2030522	91.34	23.37
8	34.50	1066	1084	1114	55783	3719486	2223009	100.00	25.58
9	37.37	1157	1176	1194	11799	1756175	493785	22.22	5.68
10	37.11	1207	1252	1256	22178	2894007	1203494	54.14	13.85

Sum of corrected areas: 8689350.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown window
1	250.0	530399.	8.44	.33 - 13.54
2	250.0	983746.	18.63	13.54 - 21.04
3	250.0	1095738.	23.45	21.04 - 39.79

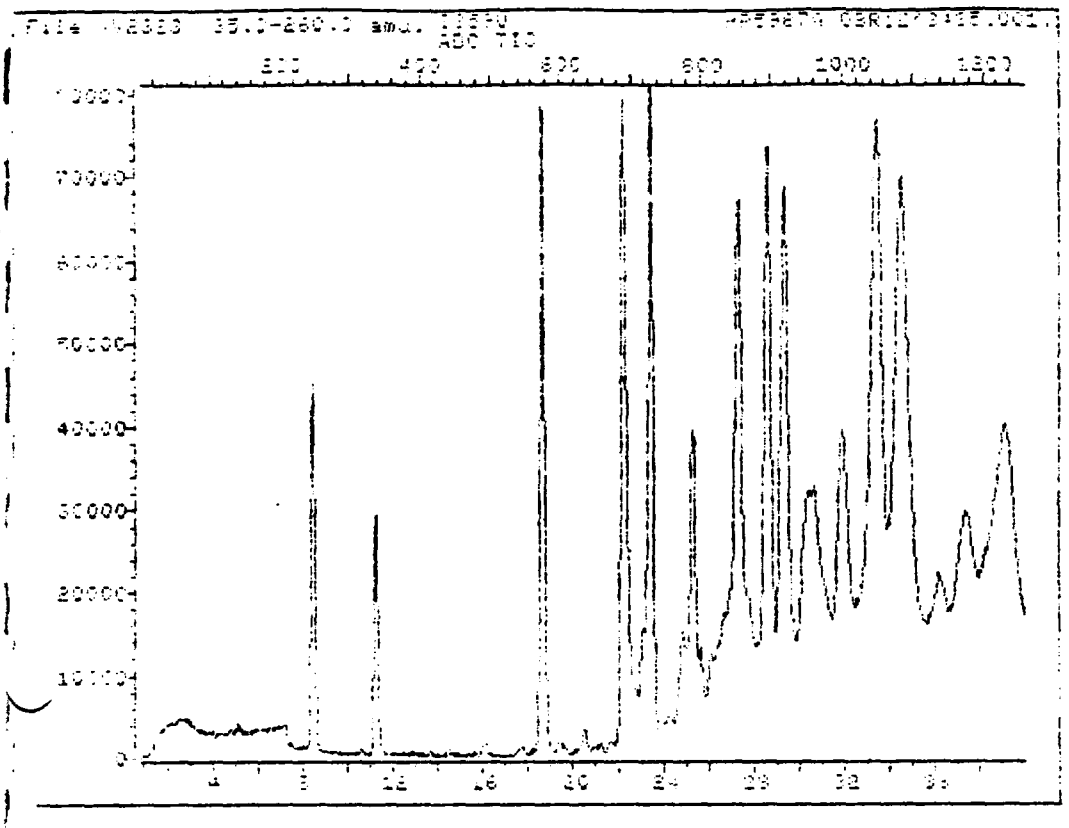
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

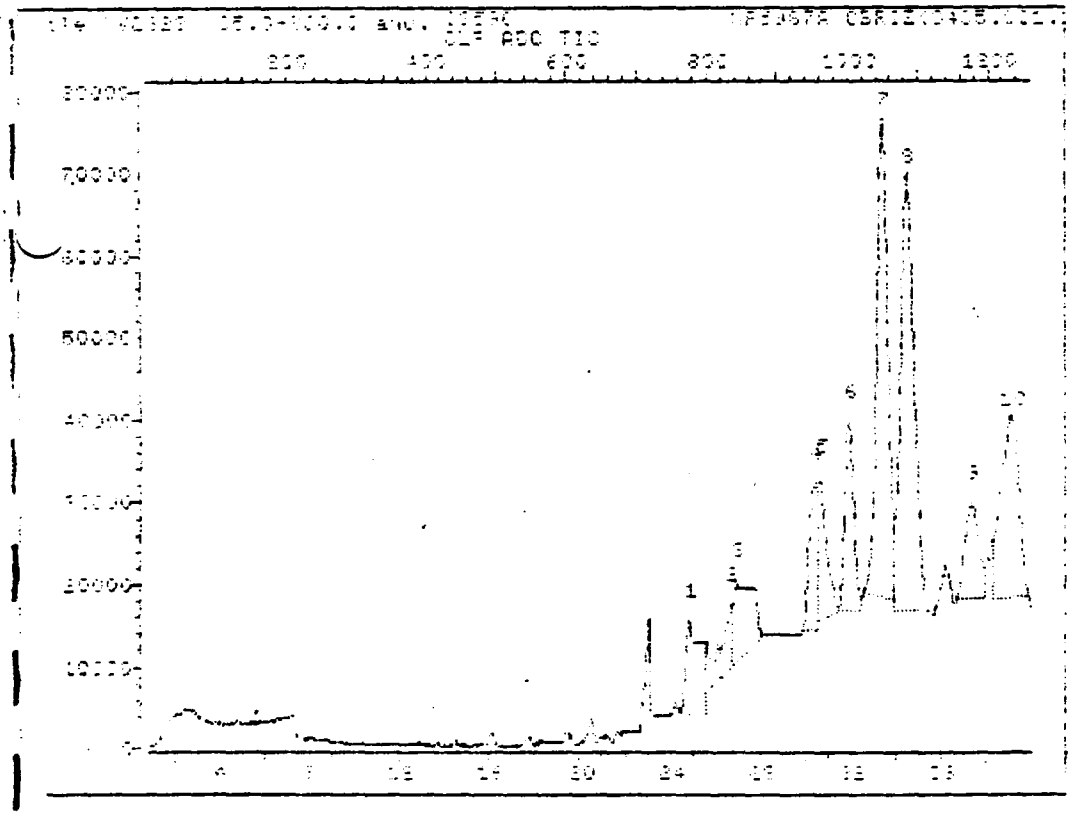
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

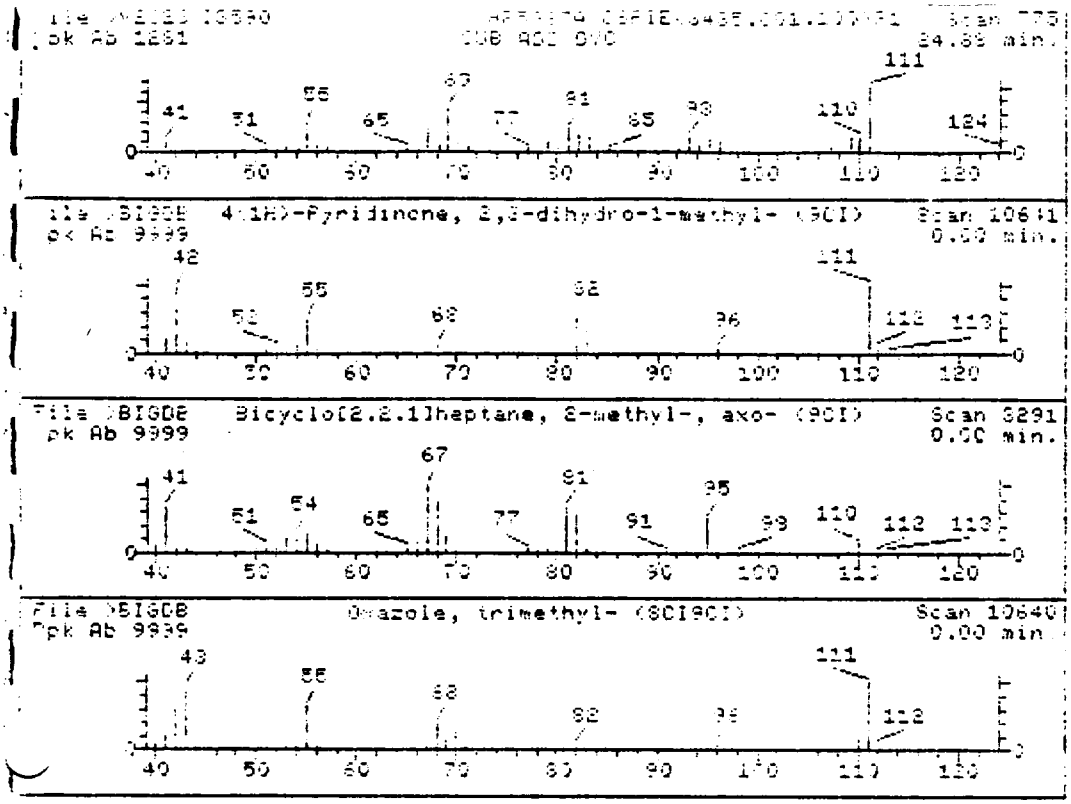
$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

4:46 PM THU., 27 APR., 1989

$$\text{Factor} = \frac{\frac{10000}{100}}{(4.0321)(1.0000)(0.521)} = 47.60 \cdot 83$$


ADC TIC


ADC TIC

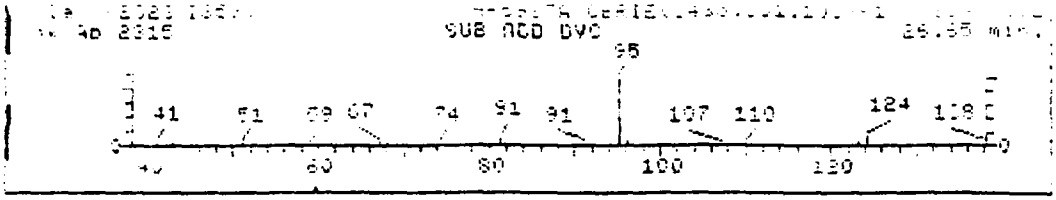


Unknown #,.
Area = 512950.0 Tentative Concentration is 120.00

1.	4(1H)-Pyridinone, 2,3-dihydro-1-methyl- (9CI)	111 C6H9NO
2.	Bicyclo[2.2.1]heptane, 2-methyl-, exo- (9CI)	110 C8H14
3.	Oxazole, trimethyl- (8CI9CI)	111 C6H9NO
4.	Bicyclo[2.2.2]octane (8CI9CI)	110 C8H14
5.	3,4-Octadiene, 7-methyl- (9CI)	124 C9H16
6.	3-Octyne, 2-methyl- (9CI)	124 C9H16
7.	Bicyclo[3.2.1]octane (8CI9CI)	110 C8H14

Sample file: >V2323 Spectrum #: 775
Search speed: 3 Tilting option: N No. of ion ranges searched:

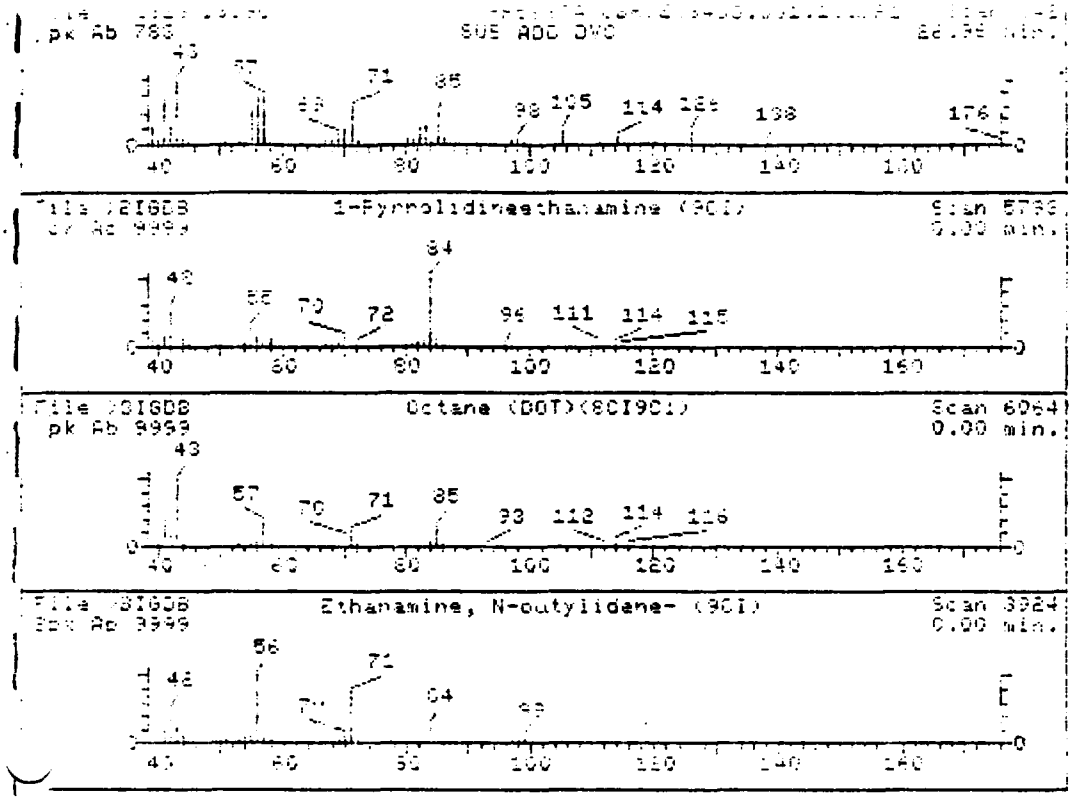
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	L_I
1.	20*	35488007	10641	*BIGDB	27	77	3	0	91	53	7	1



Unknown #.2
Area = 183444.0 Tentative Concentration is 42.00

Sample File: >U2323 Spectrum #: 372

No data base entries were retrieved.

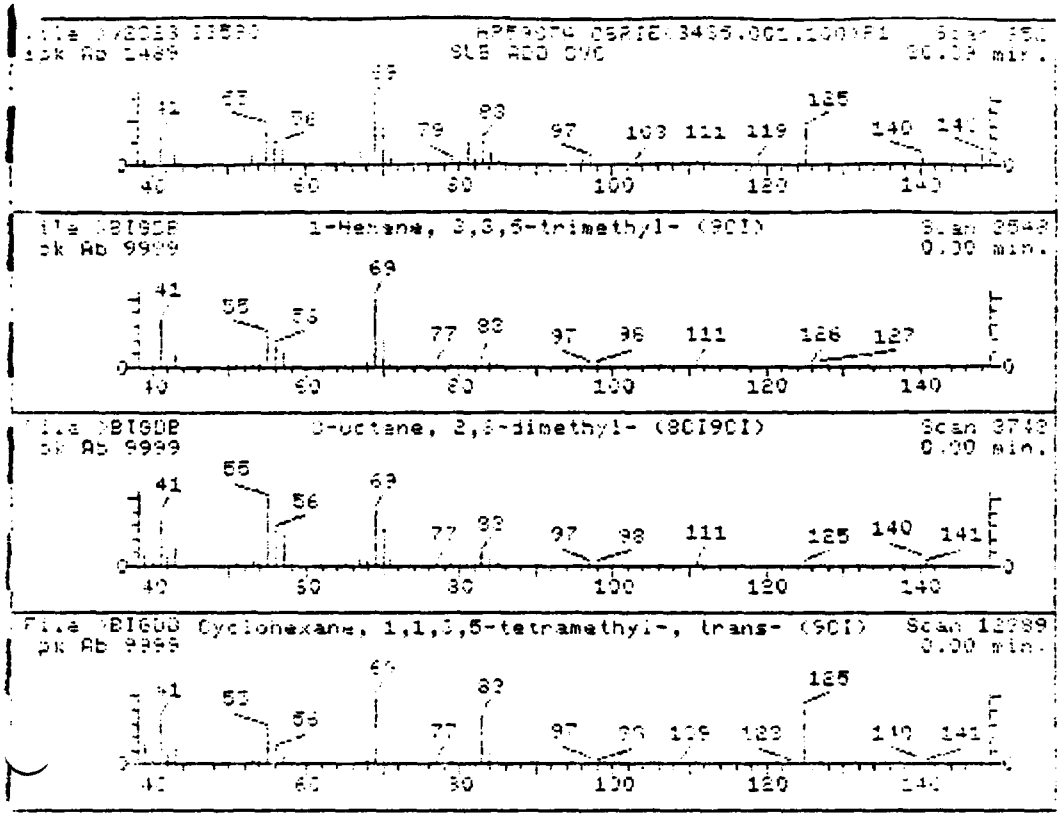


Unknown #,[illegible]
Area = 515085.) Tentative Concentration is 120.00)

1.	1-Pyrrolidineethanamine (9CI)	114 C6H14N2
2.	Octane (DOT)(8CI9CI)	114 C8H18
3.	Ethanamine, N-butylidene- (9CI)	99 C6H13N
4.	Azetidine, 1-methyl- (8CI9CI)	71 C4H9N
5.	Ethane, isocyanato- (9CI)	71 C3H5NO
6.	4-Piperidinemethanamine (9CI)	114 C6H14N2
7.	Cyclopropane, 1-methyl-2-pentyl- (9CI)	126 C9H18

Sample file: 902323 Spectrum #: 042
Search speed: 3 Tilting option: N No. of ion ranges searched:

	Prob.	CAS #	CON #	ROOT	%	DX	#FLG	TILT	%	CON	C_I	A_IX
1.	36*	7154736	5793	"BIGDB	31	68	3	0	55a	18	1-	
2.	37*	111659	6064	"BIGDB	52	41	2	0	173	47	11	
3.	25*	1611127	3924	"BIGDB	37	58	1	0	84	49	7	
4.	25*	4923799	3893	"BIGDB	54	67	5	0	155	44	8	
5.	25*	109900	3880	"BIGDB	10	53	0	0	74	30	7	
6.	23*	7144050	11341	"BIGDB	56	78	2	0	74	48	7	
7.	23*	41977571	13213	"BIGDB	31	80	3	0	62	49		

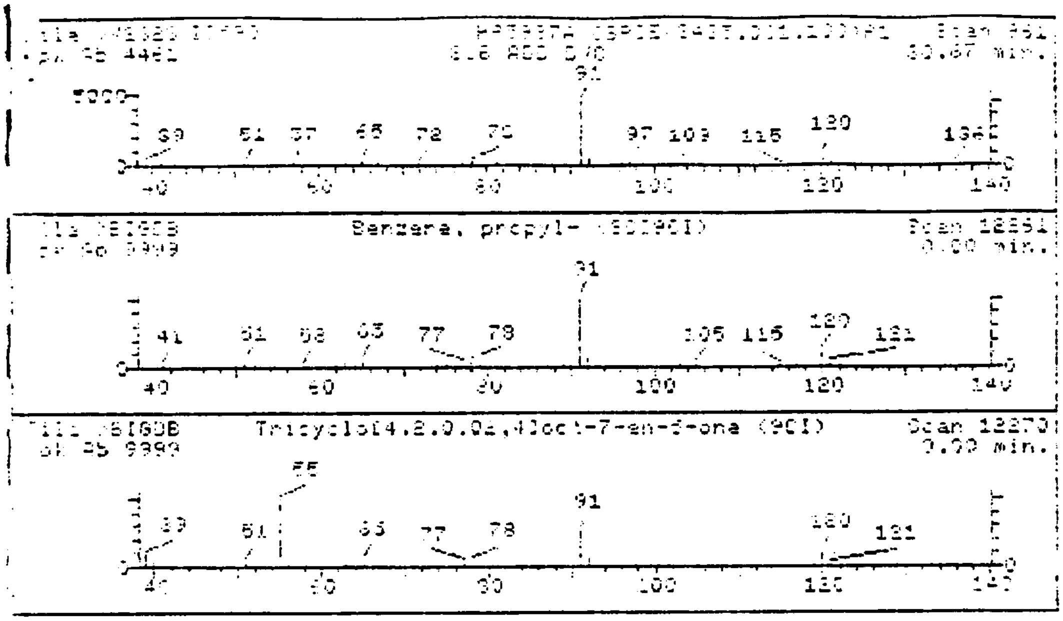


Unknown #.4
Area = 450060.0 Tentative Concentration is 98.00

1.	1-Hexene, 3,3,5-trimethyl- (9CI)	126 C9H18
2.	3-Octene, 2,6-dimethyl- (8CI9CI)	140 C10H20
3.	Cyclohexane, 1,1,3,5-tetramethyl-, trans- (9CI)	140 C10H20
4.	1-Octene, 3,3-dimethyl- (9CI)	140 C10H20
5.	5-Nonene, 2-methyl- (9CI)	140 C10H20
6.	Cyanamide, dimethyl- (8CI9CI)	70 C3H6N2
7.	5-Nonene, 5-methyl-, (E)- (9CI)	140 C10H20

Sample file: >V2323 Spectrum #: 932
Search speed: 5 Tilting option: N No. of ion ranges searched:

	Area	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	%_IV
1.	35*	15427435	3548	"BIGDB	31	62	0	0	73	42	13	0
2.	26*	6874289	3743	"BIGDB	52	56	1	0	50	54	5	0
3.	27*	50373818	12939	"CIGDB	29	75	1	1	10	70	10	0
4.	26*	74511516	3775	"BIGDB	34	72	2	0	74	41	8	0
5.	25*	53966533	1113	"BIGJB	45	61	1	1	57	49	7	0
6.	25*	1487774	3306	"BIGDB	32	91	1	0	100	43	7	0
7.	25*	6940541	3747	"BIGDB	25	64	1	1	100	46	7	0

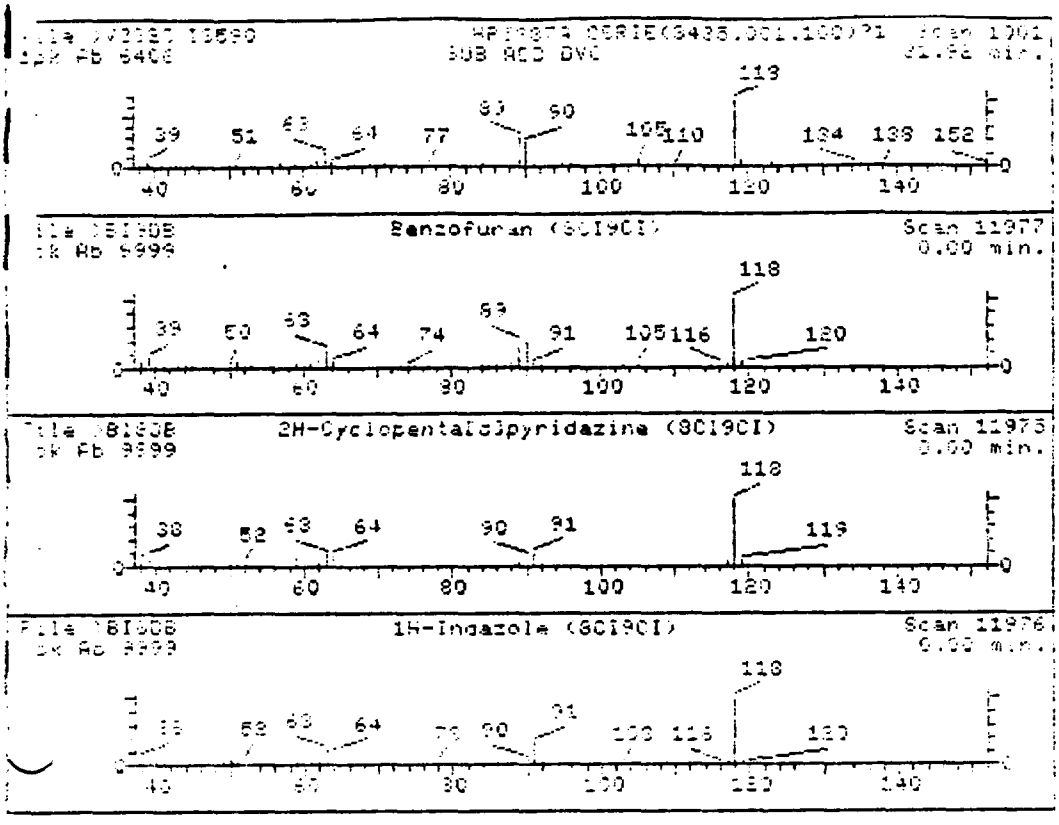


Unknown #,5
Area = 457236.0 Tentative Concentration is 100.00

1. Benzene, propyl- (SCI9CI) 120 [illegible]
2. Tricyclo[4.2.0.02,4]oct-7-en-5-one (9CI) 120 [illegible]

Sample File: >U2F23 Spectrum #: 7a1
Search speed: 3 Tilting option: N No. of ion ranges searched: [illegible]

Prob.	CAS #	CON #	ROOT	[illegible]	SK	#FLG	TILT	X	CON	[illegible]	[illegible]
1. 81*	103651	12261	"BIGDB	57	48	2	0	[illegible]	[illegible]	[illegible]	[illegible]
2. 25*	56666785	12270	'BIGDB	[illegible]	43	1	0	32	51		

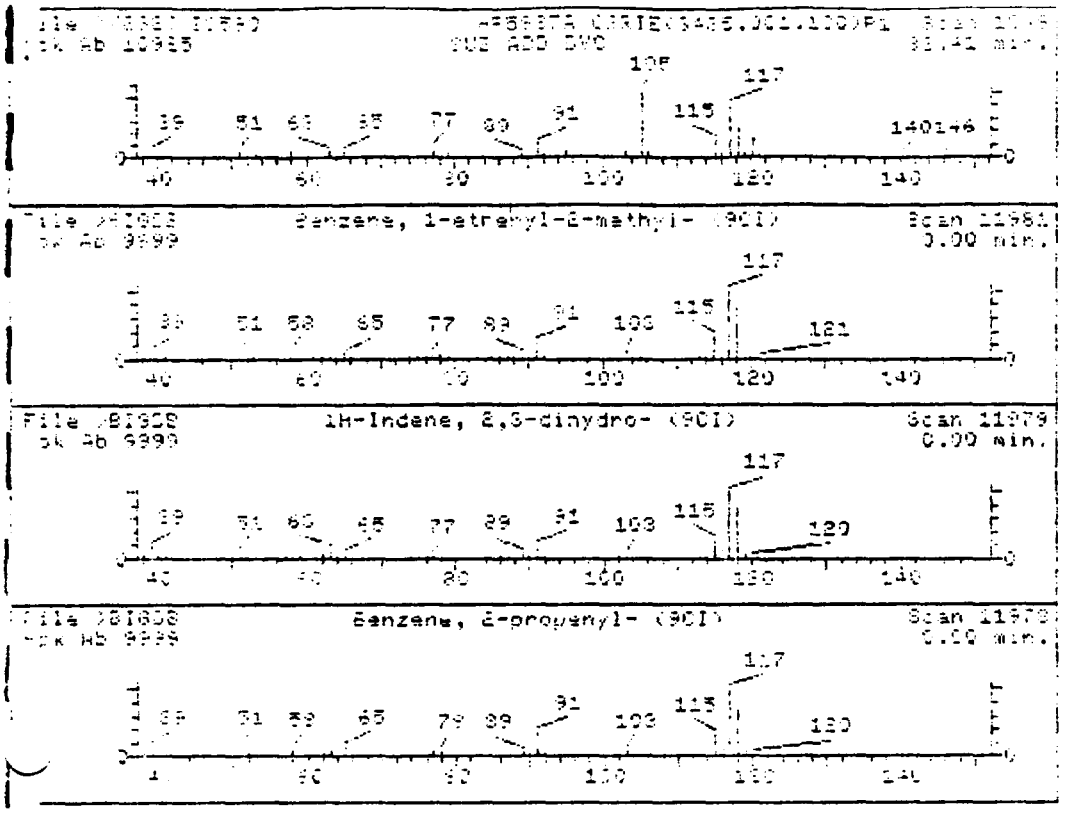


Unknown #,6
Area = 625127.0 Tentative Concentration is 140.00

1.	Benzofuran (8CI9CI)	118 C8H6O
2.	2H-Cyclopenta[d]pyridazine (8CI9CI)	118 C7H6N2
3.	1H-Indazole (8CI9CI)	118 C7H6N2
4.	1H-Benzimidazole (9CI)	118 C7H6N2

Sample file: >V2523 Spectrum #: 1001
Search speed: 3 Tilting option: N No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	F_I
1.	63*	271896	11977	"BIGDB	50	52	2	0	81	3	57	23
2.	45*	270644	11975	"BIGDB	32	65	2	1	10	25	17	1
3.	37*	271443	11976	"BIGDB	32	70	2	0	100	3	14	1
4	36*	51172	11969	"BIGDB	33	58	3	0	10	30	14	1

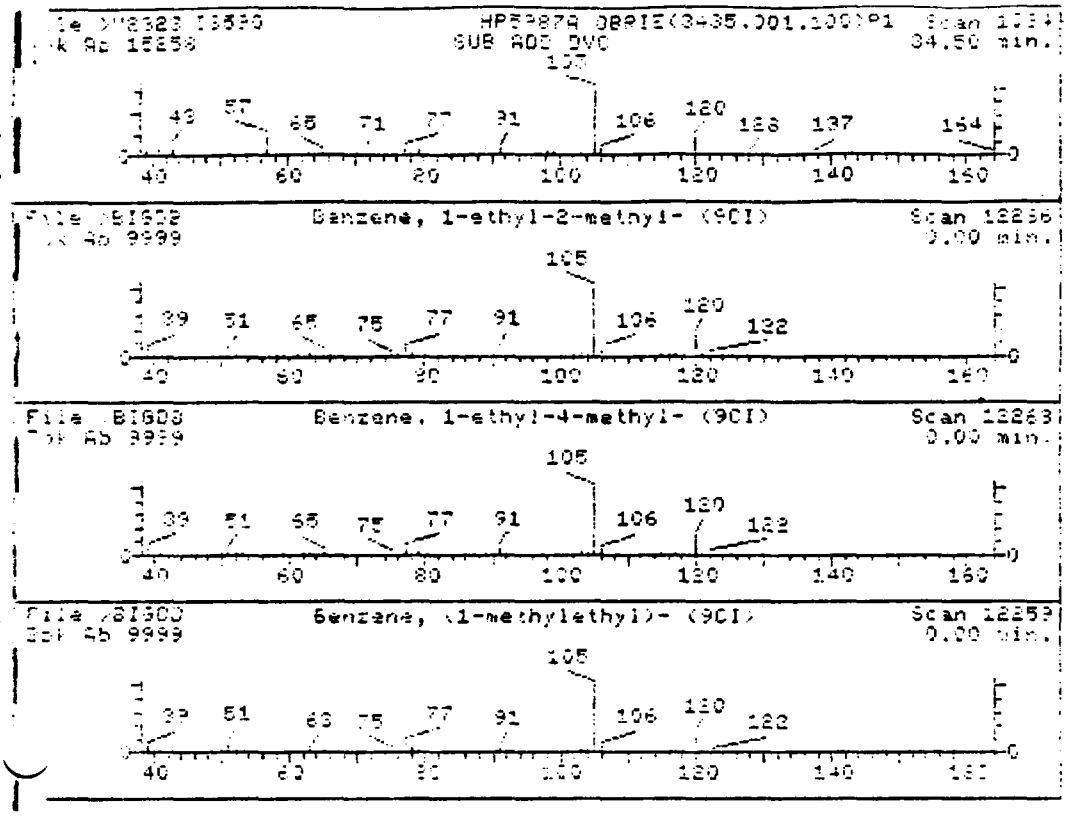


Unknown #,7
rea = 1170512. Tentative Concentration is 469.00

1.	Benzene, 1-ethenyl-2-methyl- (9CI)	118 C9H10
2.	1H-Indene, 2,3-dihydro- (9CI)	118 C9H10
3.	Benzene, 2-propenyl- (9CI)	118 C9H10
4.	Benzene, 1,1'-(1-ethenyl-1,3-propanediyl)bis- (9CI)	232 C17H20
5.	Benzene, (1-methylethyl)- (9CI)	120 C9H12
6.	Benzene, cyclopropyl- (8CI9CI)	118 C9H10
7.	Benzene, 1-ethyl-2-methyl- (9CI)	120 C9H12

Sample file: >V2323 Spectrum #: 1049
Search speed: 3 Tilting option: N No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	CLI	FLI
1	71*	c111154	11981	*BIGDB	65	38	0	0	58	44	24	17
2	61*	498117	11979	*BIGDB	67	35	1	0	57	42	18	13
3	41*	300572	11978	*BIGDB	54	43	2	0	60	45	14	11
4	36	c1141977	18001	*BIGDB	78	35	2	0	55	40	14	10
5	31*	96829	12259	*BIGDB	61	26	1	0	76	59	6	5
6	31*	877494	11986	*BIGDB	70	40	1	0	59	38	5	3
7	31*	611145	12256	*BIGDB	53	32	1	0	71	51	5	4

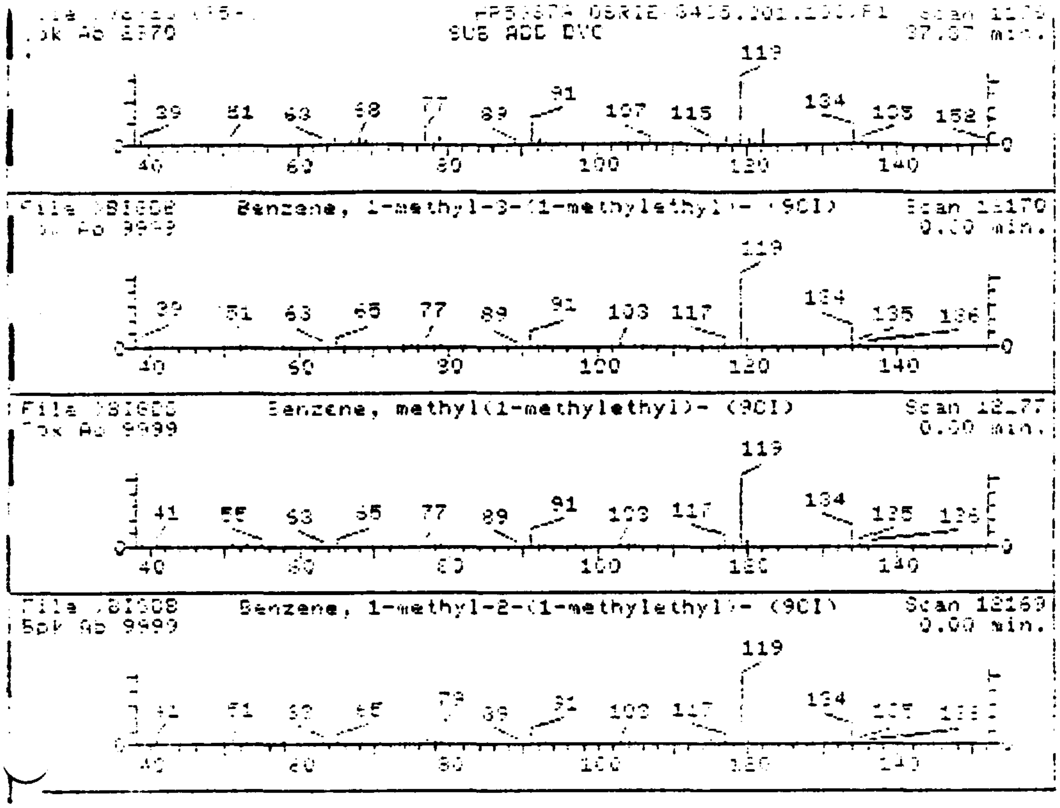


Unknown #,3
rea = 2223009. Tentative Concentration is 510.00

1.	Benzene, 1-ethyl-2-methyl- (9CI)	120.09412
2.	Benzene, 1-ethyl-4-methyl- (9CI)	120.09412
3.	Benzene, (1-methylethyl)- (9CI)	120.09412
4.	Benzene, 1-ethyl-3-methyl- (9CI)	120.09412
5.	Benzene, 1,2,3-trimethyl- (8CI,9CI)	120.09412
6.	Benzene, (1,3-dimethyl-3-butenyl)- (9CI)	160.12816
7.	Pyridine, 2-ethenyl- (9CI)	105.05784

Sample file: >V2323 Spectrum #: 1084
earch speed: 3 Tilting option: N No. of ion ranges searched:

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	S_IO
1.	83*	611143	12286	"BIGDB	64	21	2	0	84	9	54	57
2.	83*	622968	12268	"BIGDB	63	22	2	0	90	9	54	56
3.	83*	98828	12259	"BIGDB	64	23	2	0	86	7	54	57
4.	83*	620144	12267	"BIGDB	63	24	2	0	82	9	54	56
5.	36*	526738	12293	"BIGDB	50	50	1	0	55	27	14	27
6.	35	56851515	9933	"BIGDB	56	42	2	0	100	29	14	11
7.	29*	100694	523	"BIGDB	27	77	3	0	100	55	10	10

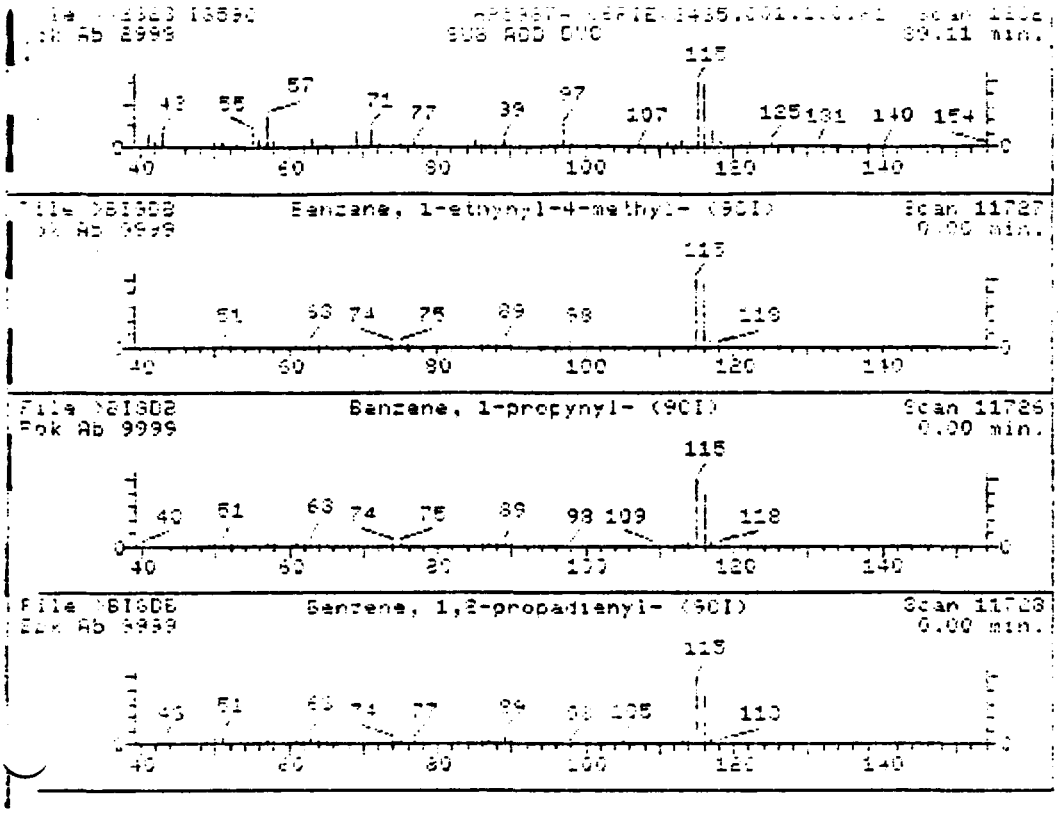


Unknown #,9
Area = 475585.0 Tentative Concentration is 11.00

1. Benzene, 1-methyl-3-(1-methylethyl)- (9CI) 134 C10H14
2. Benzene, methyl(1-methylethyl)- (9CI) 134 C10H14
3. Benzene, 1-methyl-2-(1-methylethyl)- (9CI) 134 C10H14
4. Benzene, 1-ethyl-2,4-dimethyl- (9CI) 134 C10H14
5. Benzene, (1,1-dimethylethyl)- (9CI) 134 C10H14
6. Benzene, 2-ethyl-1,3-dimethyl- (9CI) 134 C10H14
7. Benzene, 2-ethyl-1,4-dimethyl- (9CI) 134 C10H14

Sample file: >V2323 Spectrum #: 1176
Search speed: 3 Tilting option: N No. of ion ranges searched:

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	[illegible]	[illegible]
1.	67*	535773	12170	"BIGDB	57	32	1	0	94	26	27	[illegible]
2.	59*	25155151	12177	"BIGDB	54	36	2	0	95	27	24	[illegible]
3.	59*	527844	12169	"BIGDB	52	40	1	0	100	25	27	[illegible]
4.	55*	874419	12171	"BIGDB	49	39	1	0	89	32	20	[illegible]
5.	46*	98066	12167	"BIGDB	46	47	2	0	95	27	[illegible]	[illegible]
6.	44*	2870044	12174	"BIGDB	45	44	1	0	78	33	16	[illegible]
7.	42*	1758889	12181	"BIGDB	46	43	1	0	72	32	[illegible]	[illegible]



Unknown #,10
rea = 1203474. Tentative Concentration is 270.00

1. Benzene, 1-ethynyl-4-methyl- (9CI) 116 C9H8
2. Benzene, 1-propynyl- (9CI) 116 C9H8
3. Benzene, 1,2-propadienyl- (9CI) 116 C9H8
4. 1H-Indene (9CI) 116 C9H8
5. 1H-Indene, 1-chloro-2,3-dihydro- (9CI) 152 C9H9Cl

Sample file: >02323 Spectrum #: 1232
Search speed: 3 Tilting option: N No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	DSN	C_I	R_I
1.	91*	766972	11727	"BIGDB	67	17	0	0	97	17	67	77
2.	84*	673325	11726	"BIGDB	46	46	2	0	98	23	22	26
3.	54*	2327993	11729	"BIGDB	47	47	2	0	91	27	21	11
4.	47*	95136	11724	"BIGDB	55	43	1	1	67	41	16	-2
5.	28	35275629	11746	"BIGDB	42	50	1	0	74	30	10	0

QUANT REPORT

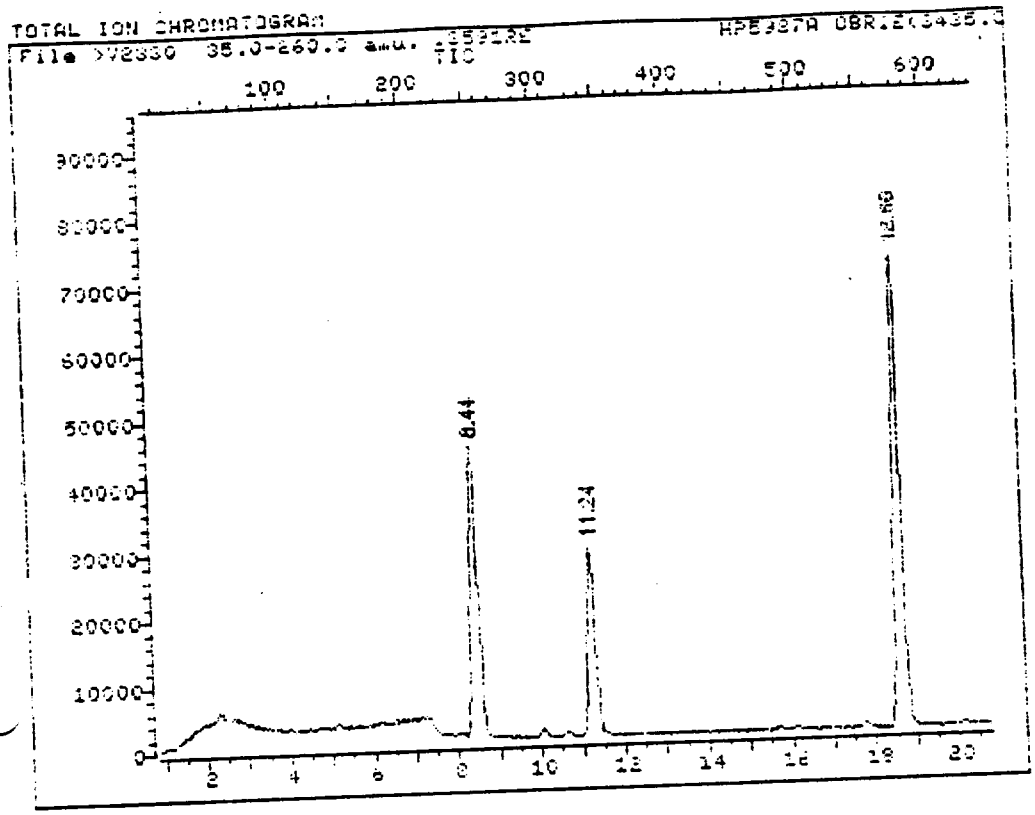
Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 12:57
Output File: V2330::D1 Injected at: 890419 11:44
Data File: V2330::D2 Dilution Factor: 1.00000
Name: I5591RE
Misc: HP5987A OBRIE(3435.001.100)P1

ID File: ID.ML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.44	128.0	81028	250.00	NG	99
✓4)	Vinyl Chloride	2.32	62.0	5930	11.59	NG	97
~~2)~~	~~Methylene Chloride~~	~~5.13~~	~~84.0~~	~~1613~~	~~3.17~~	~~NG~~	~~77~~
~~3)~~	~~Acetone~~	~~6.00~~	~~43.0~~	~~4722~~	~~24.04~~	~~NG~~	~~94~~
✓10)	1,2-Dichloroethene (total)	10.05	96.0	2971	5.99	NG	85
✓13)	Chloroform	10.61	83.0	3912	4.45	NG	92
(5)	1,2-Dichloroethane-d4	11.24	65.0	106235	221.85	NG	86
18)	*1,4-Difluorobenzene	19.66	114.0	371928M	250.00	NG	100
✓29)	2-Butanone	11.36	72.0	1213	23.04	NG	96
32)	*Chlorobenzene-d5	23.45	117.0	324275M	250.00	NG	98
✓35)	Tetrachloroethene	21.24	164.0	7986	13.01	NG	97
37)	Toluene-d8	22.23	98.0	399372	237.80	NG	100
✓38)	Toluene	22.42	92.0	5476	5.22	NG	94
41)	Bromofluorobenzene	27.34	95.0	185706	224.78	NG	81
~~42)~~	~~m-Xylene~~	~~23.58~~	~~106.0~~	~~4538~~	~~5.04~~	~~NG~~	~~9~~
✓44)	Xylene (total)	29.33	106.0	6015	9.21	NG	95

* Compound is ISTD

Total Xylene = $\frac{6015}{324275} \times \frac{250}{0.69150} = 6.71$ NG



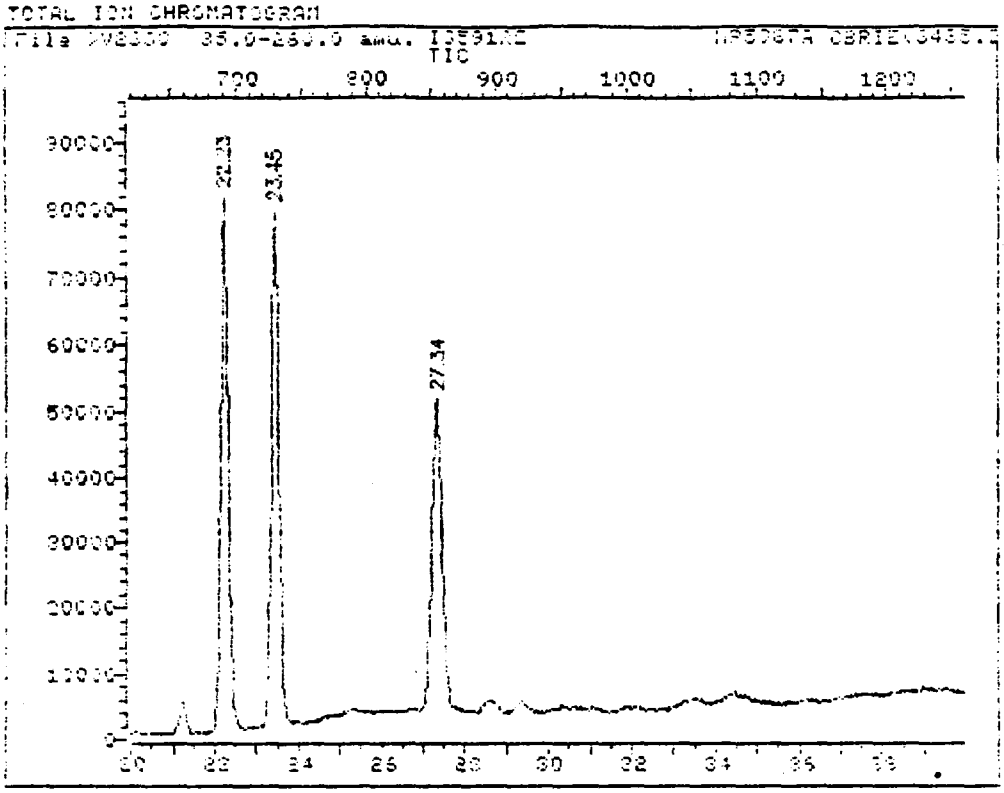
Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)P1

Id File: IDUMP::EA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 12:39
Injected at: 890419 11:44

TIC page 1 of 2

TOTAL ION CHROMATOGRAM

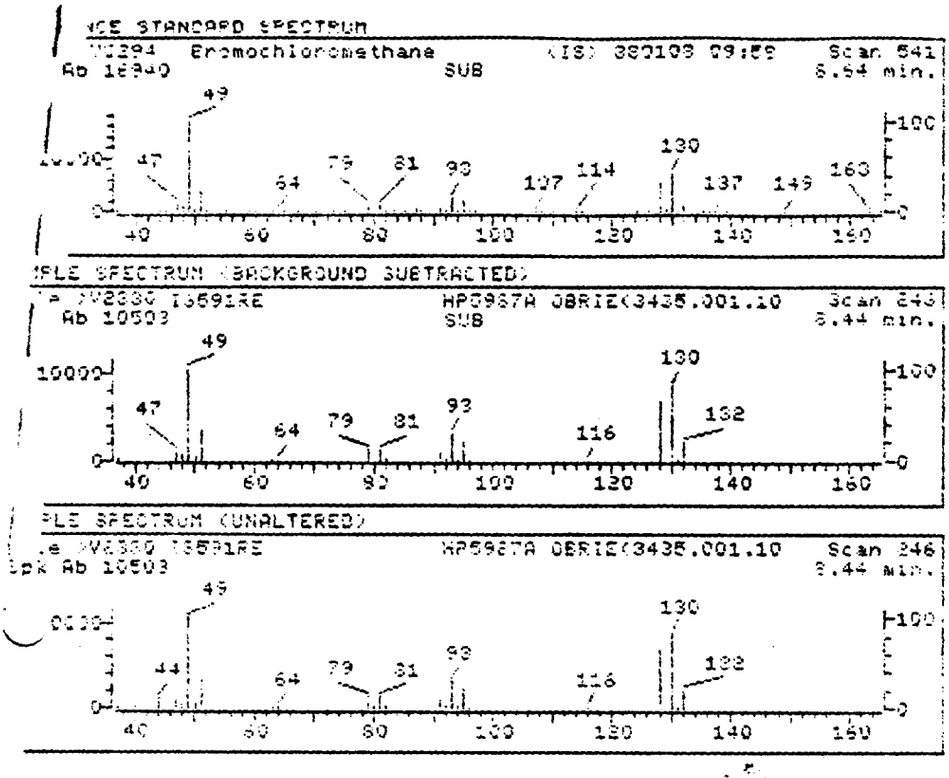


Data File: >V2330::D2 Quant Output File: ^V2330::D(
Name: I5591RE
Misc: HP5987A 0891E(5435.001.100)P1

Id File: IDVML::EA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 12:39
Injected at: 890419 11:44

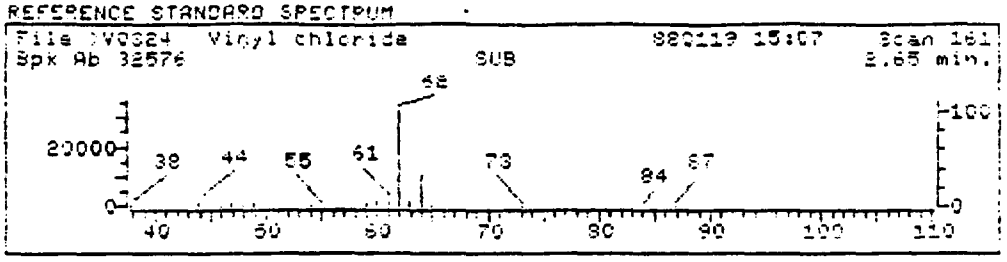
TIC page 2 of 2



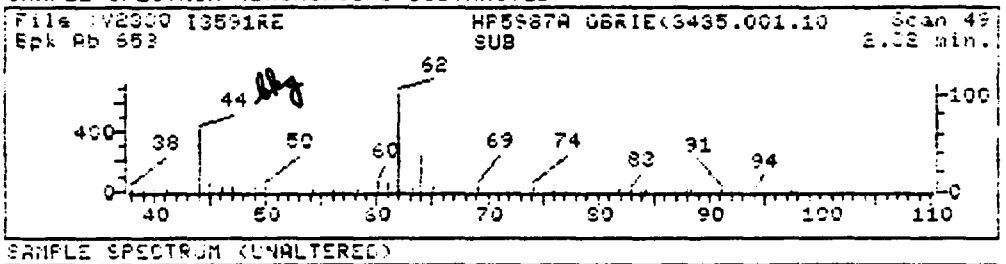
Data File: >V2330::02 Quant Output File: ^V2330::D1
Name: I359!RE
Misc: HP5987A OBRIE(3435.001.10);P1
Quant Time: 890419 12:39 Quant ID File: IDUML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:58

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 246
Retention Time: 8.44 min.
Quant Ion: 128.0
Area: 91028
Concentration: 250.00 NG
q-value: 99

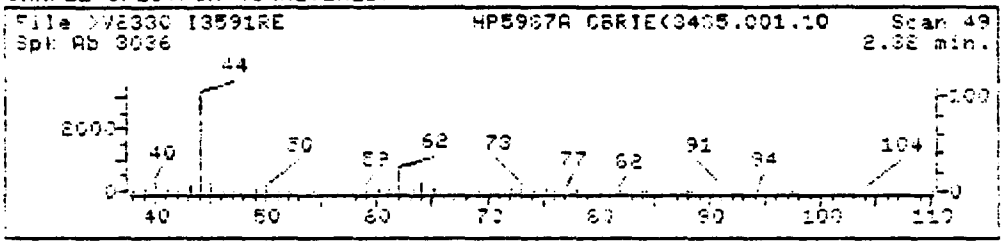
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

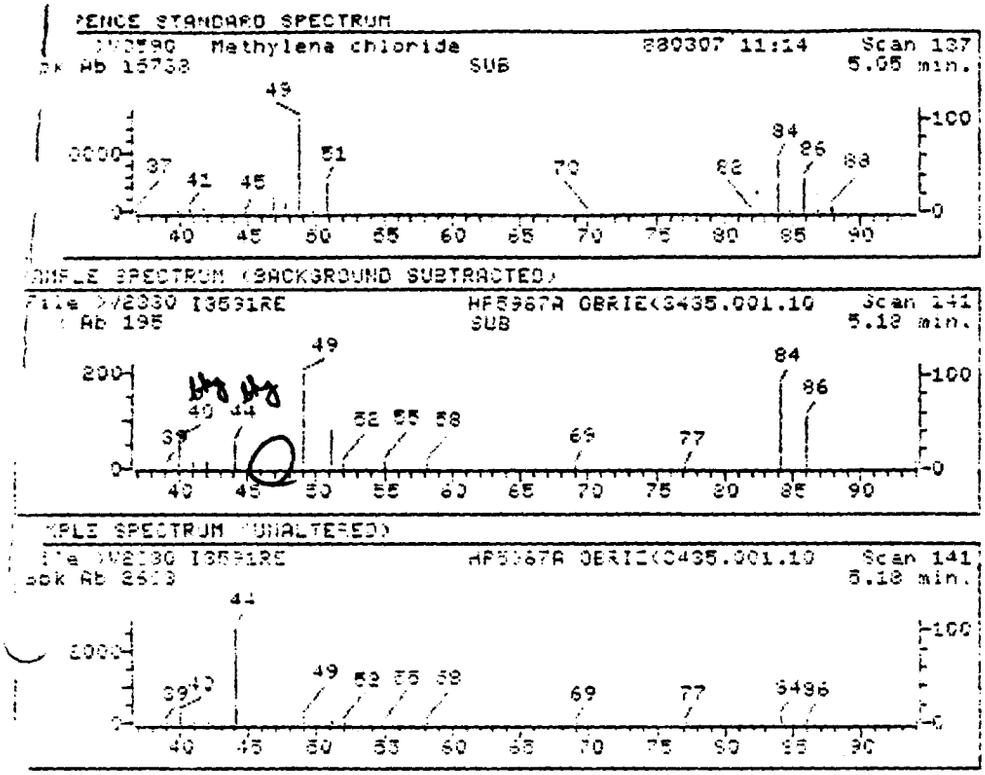


SAMPLE SPECTRUM (UNALTERED)



Data File: >U2330::D2 Quant Output File: ^U2330::D1
Name: I3591RE
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDUML_::E1
Injected at: 890419 11:44 Last Calibration: 890419 10:55

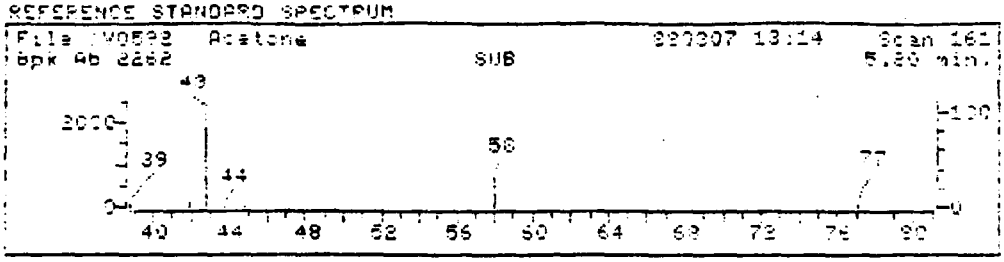
Compound No: 4
Compound Name: Vinyl Chloride
Scan Number: 49
Retention Time: 2.32 min.
Quant Ion: 62.0
Area: 5900
Concentration: 11.59 NG
q-value: 93



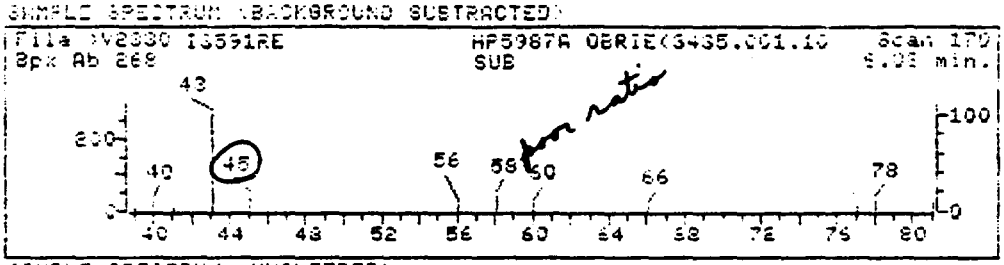
Data File: ^V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: ID^ML::5M
Injected at: 890419 11:44 Last Calibration: 890419 10:50

Compound No: 5
Compound Name: Methylene Chloride
Scan Number: 141
Retention Time: 5.18 min.
Quant Ion: 84.0
Area: 1613
Concentration: 3.07 NG
q-value: 73

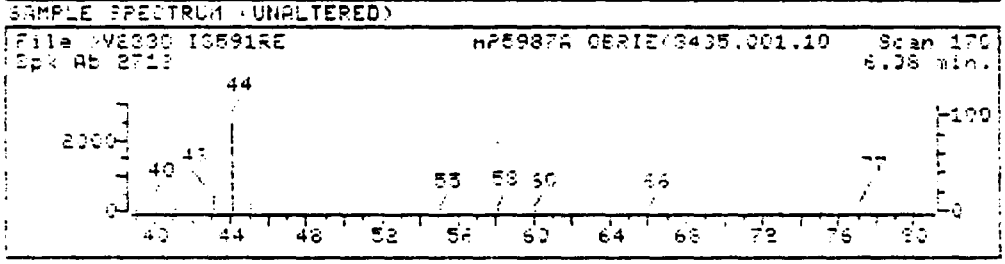
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

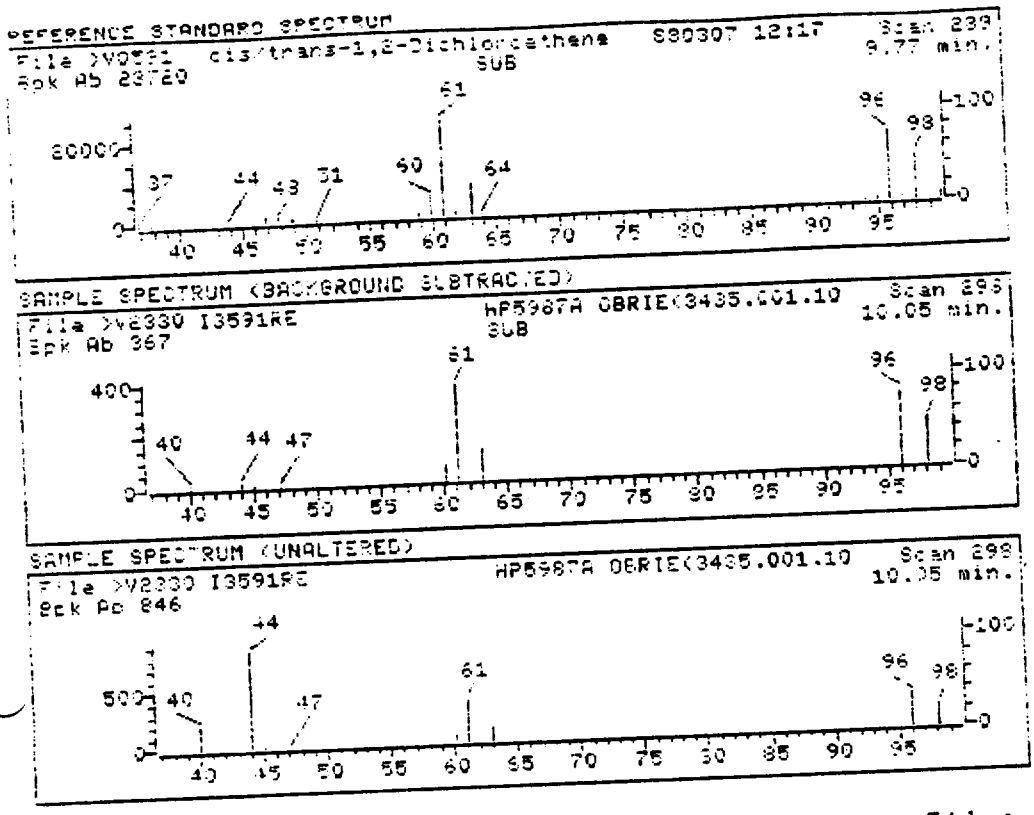


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2330::D2 Quant Output File: ^V2330::Q1
Name: I0591RE
File: HP5987A QBRIE(3435.001 10)P1
Quant Time: 890419 12:39 Quant ID File: IDUML::E7
Injected at: 890419 11:44 Last Calibration: 890419 10:79

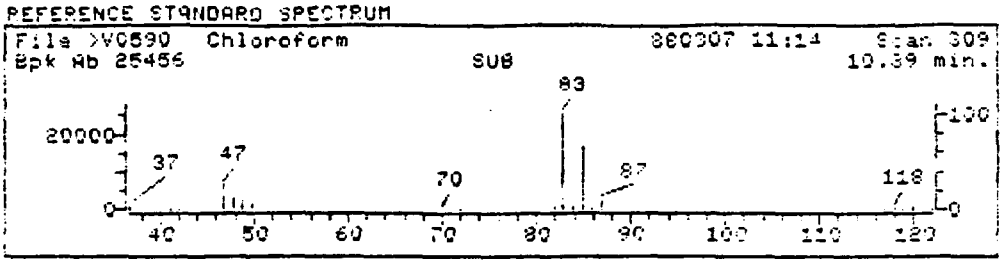
Compound No: 7
Compound Name: Acetone
Scan Number: 170
Retention Time: 6.08 min
Quant Ion: 43.0
Area: 46?ZM
Concentration: 30.64 NG
Qvalue: 83



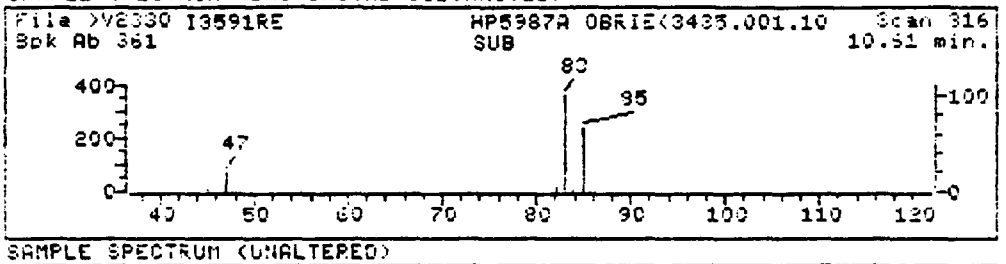
Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDUML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:56

Compound No: 12
Compound Name: 1,2-Dichloroethene (total)
Scan Number: 298
Retention Time: 10.05 min.
Quant Ion: 96.0
Area: 2971
Concentration: 5.99 NG
q-value: 83

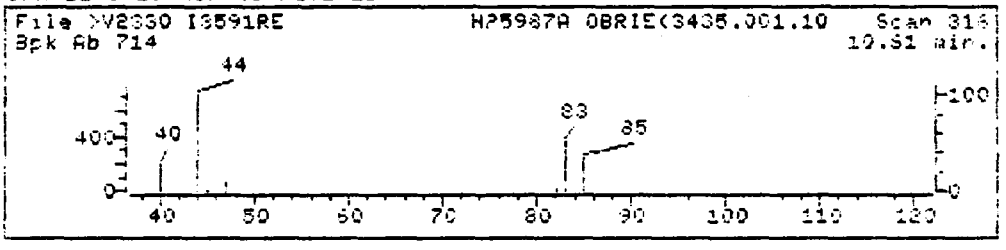
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

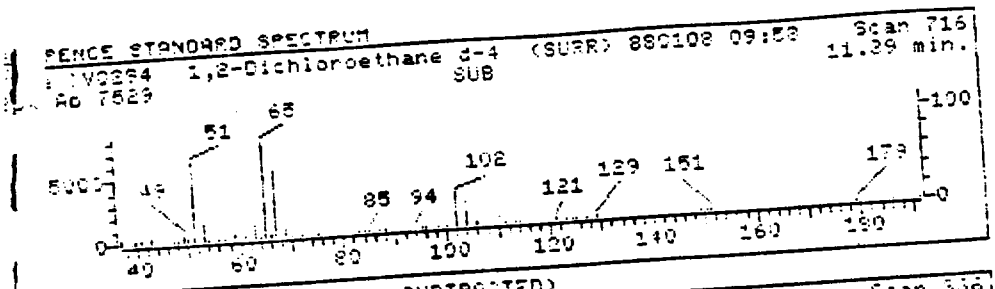


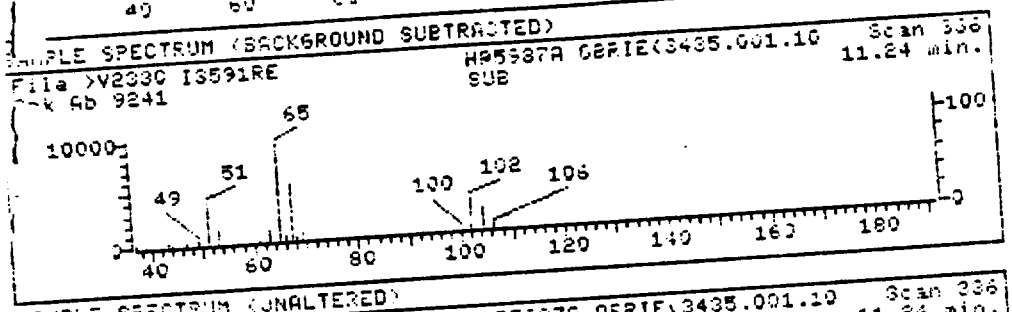
SAMPLE SPECTRUM (UNALTERED)

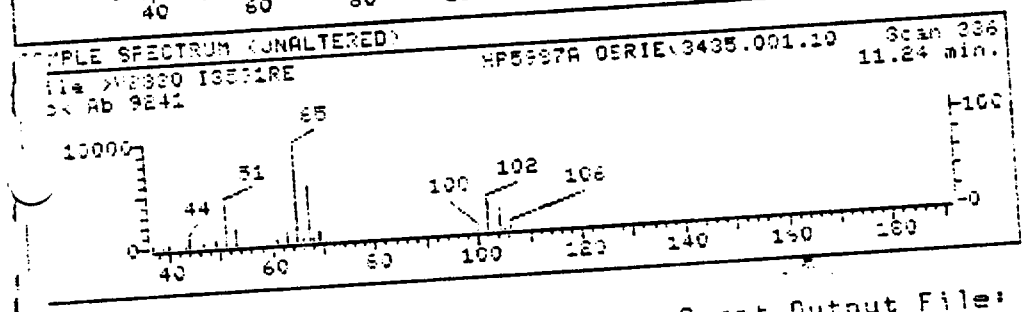


Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I359_RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDVML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:58

Compound No: 13
Compound Name: Chloroform
Scan Number: 316
Retention Time: 10.61 min.
Quant Ion: 83.0
Area: 5912
Concentration: 4.43 NG
q-value: 96



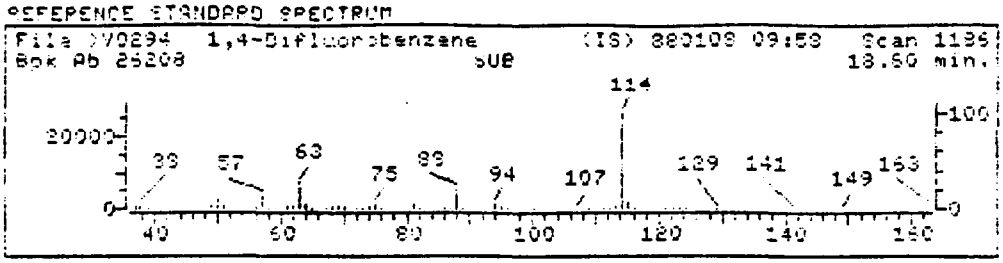




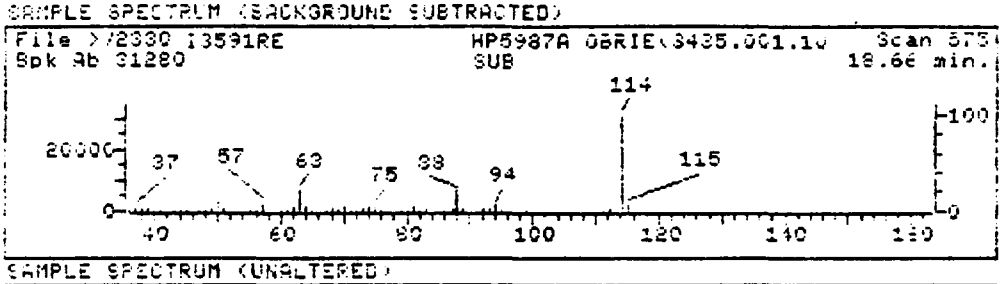
Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP59879 GBRIE(3435.001.100)F1
Quant Time: 890419 12:39 Quant ID File: IDVML:*EX
Injected at: 890419 11:44 Last Calibration: 890419 10:58

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 336
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 106235
Concentration: 221.95 NG
q-value: 86

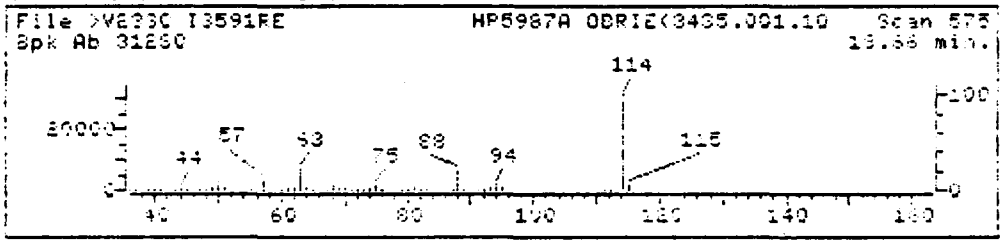
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



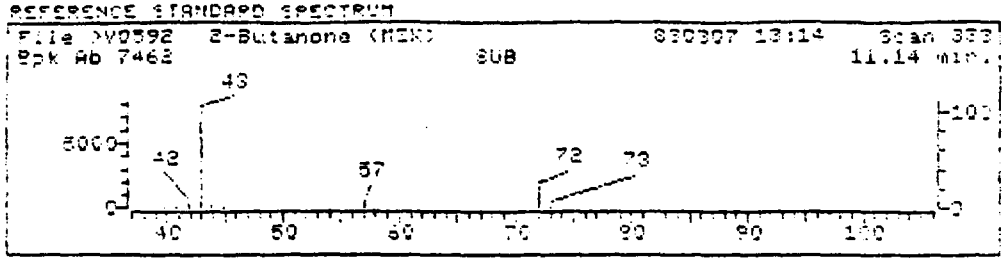
SAMPLE SPECTRUM (UNALTERED)



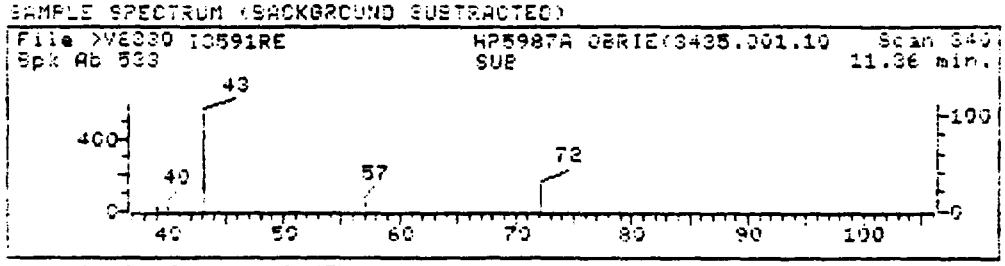
Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)PI
Quant Time: 890419 12:39 Quant ID File: IDUML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:50

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 575
Retention Time: 18.66 min.
Quant Ion: 114.0
Area: 371520M
Concentration: 250.00 NG
q-value: 100

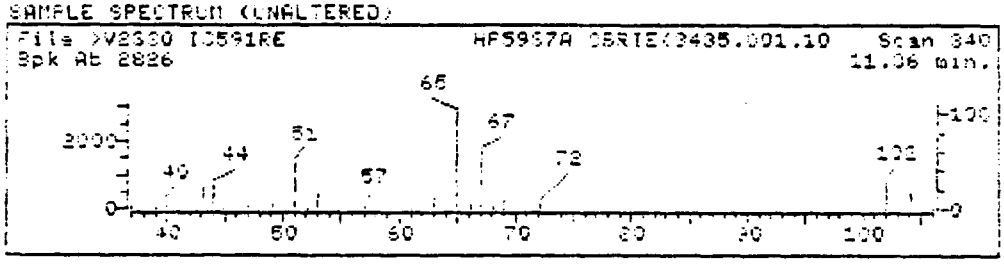
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



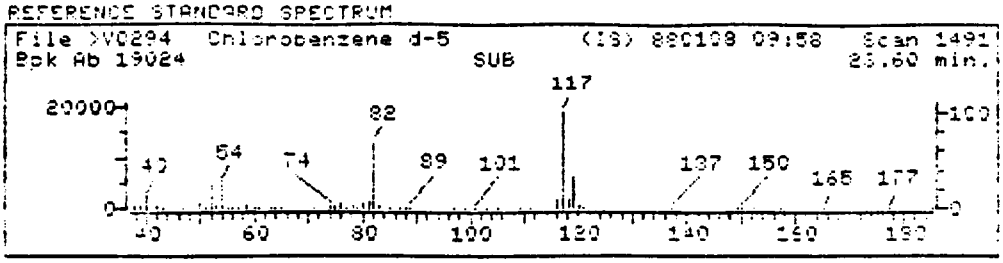
SAMPLE SPECTRUM (UNALTERED)



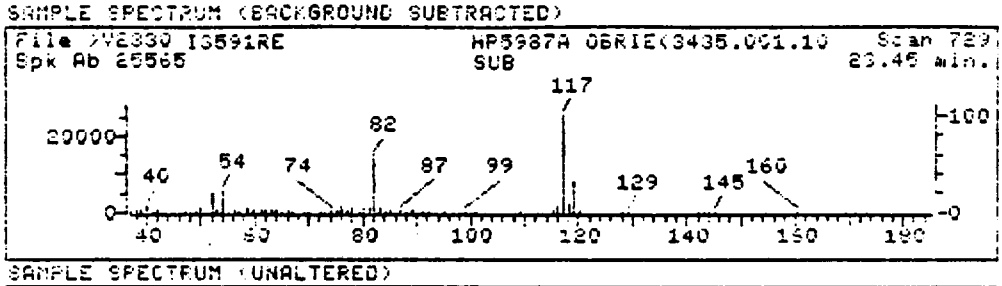
Data File: >V2330::02 Quant Output File: ^V2330::D1
Name: I0591RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: I0UML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:50

Compound No: 19
Compound Name: 2-Butanone
Scan Number: 340
Retention Time: 11.36 min.
Quant Ion: 72.0
Area: 1212
Concentration: 20.04 NG
q-value: 93

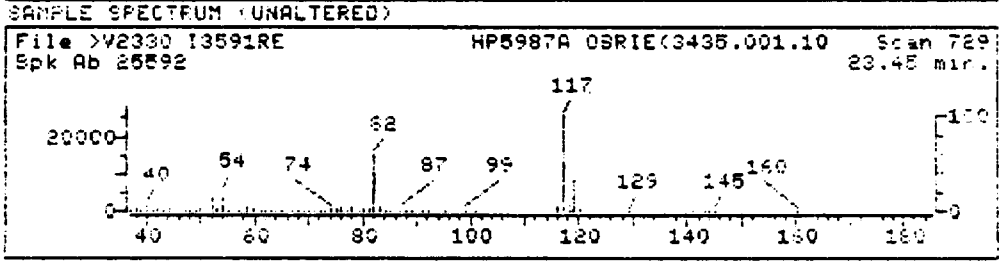
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



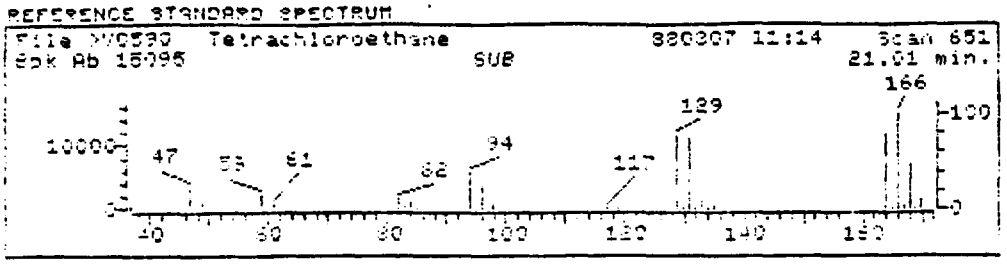
SAMPLE SPECTRUM (UNALTERED)



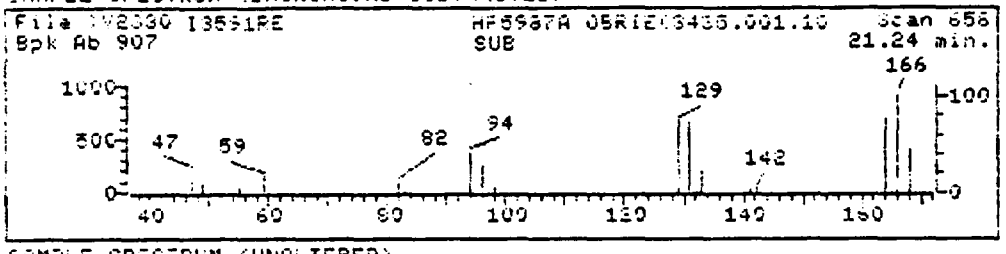
Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)F1
Quant Time: 890419 12:39 Quant ID File: IDVML::CX
Injected at: 890419 11:44 Last Calibration: 890419 10:56

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 524275M
Concentration: 250.00 NG
q-value: 93

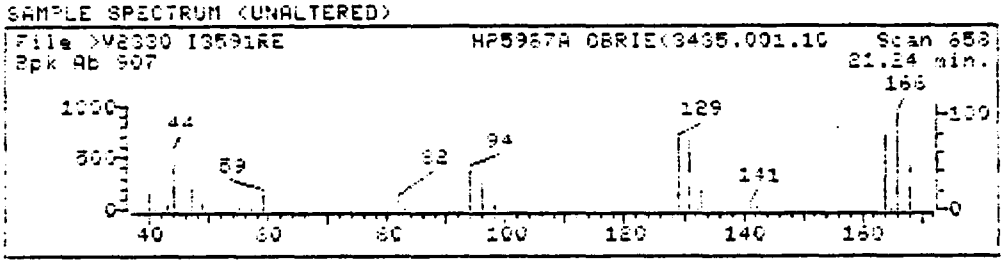
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



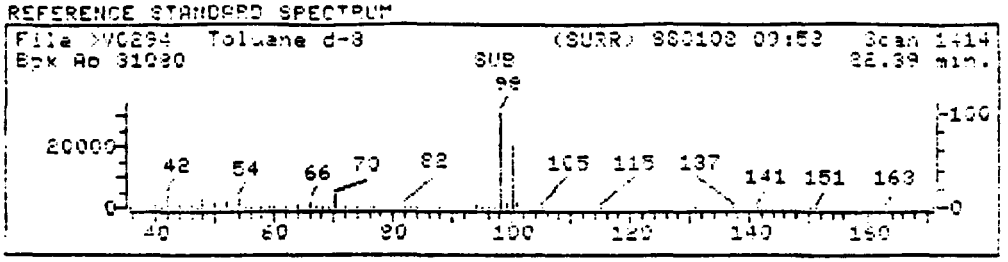
SAMPLE SPECTRUM (UNALTERED)



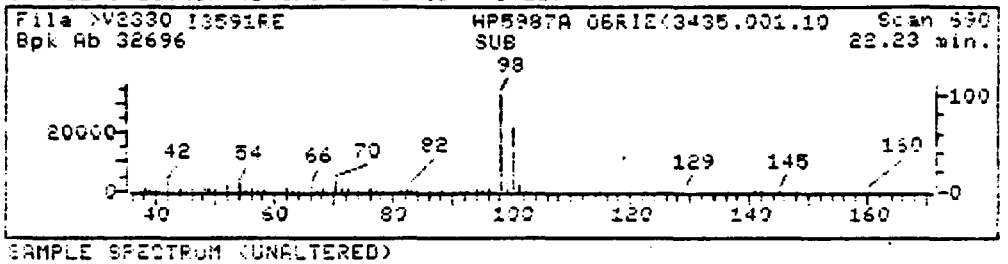
Data File: >V2330::02 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: ID:ML:(E)
Injected at: 890419 11:44 Last Calibration: 890419 10:59

Compound No: 35
Compound Name: Tetrachloroethene
Scan Number: 658
Retention Time: 21.24 min.
Quant Ion: 164.0
Area: 7886
Concentration: 18.01 NG
q-value: 93

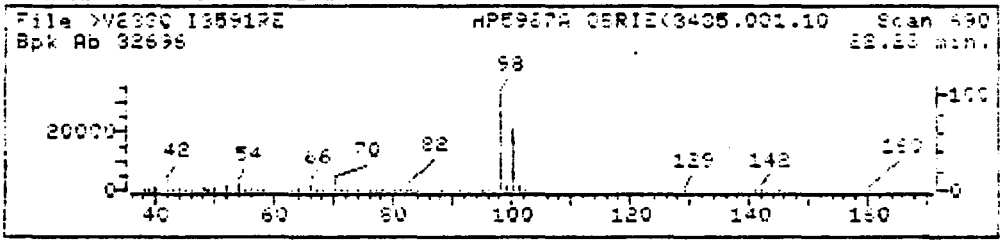
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

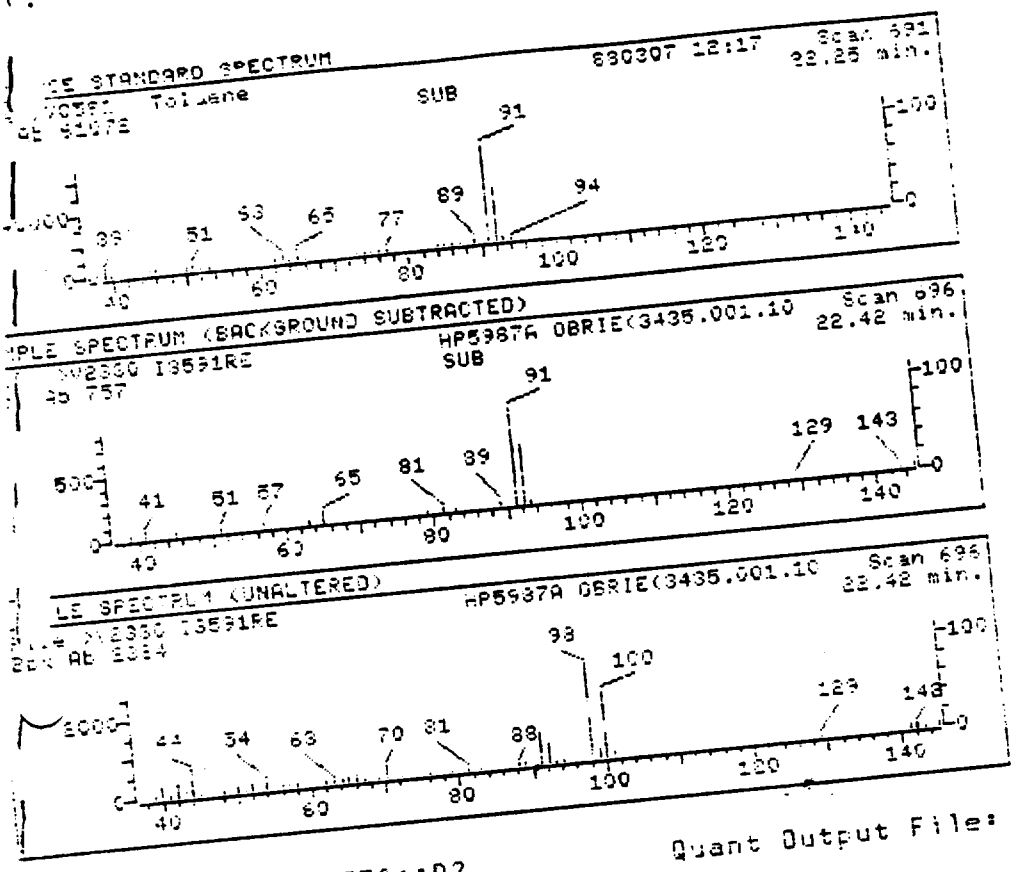


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A 0BRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDVML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:50

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.23 min.
Quant Ion: 98.0
Area: 599572
Concentration: 237.20 NG
q-value: 100



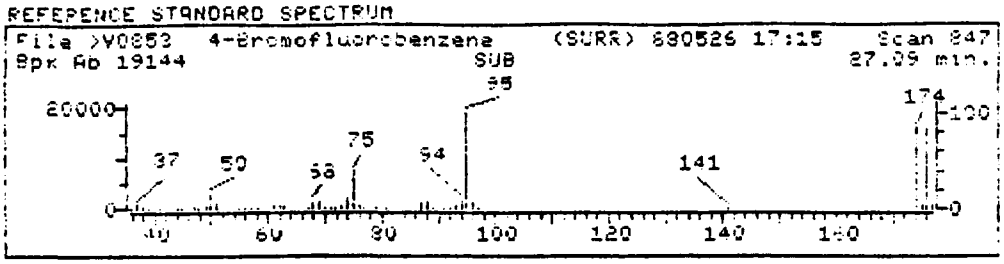
Quant Output File: ^U2330::01

Data File: >U2330::D2
Name: I359:RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39
Injected at: 890419 11:44

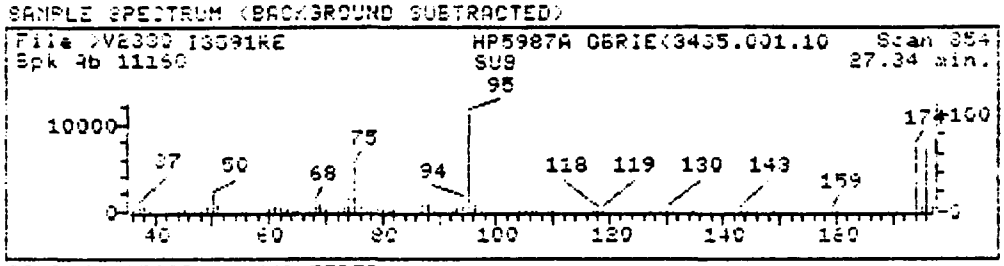
Quant ID File: IDUML::EX
Last Calibration: 890419 10:58

Compound No: 38
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 92.0
Area: 5426
Concentration: 5.22 NG
Q-value: 94

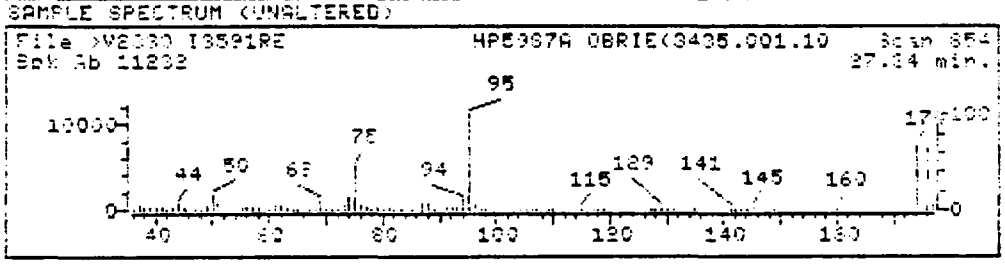
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

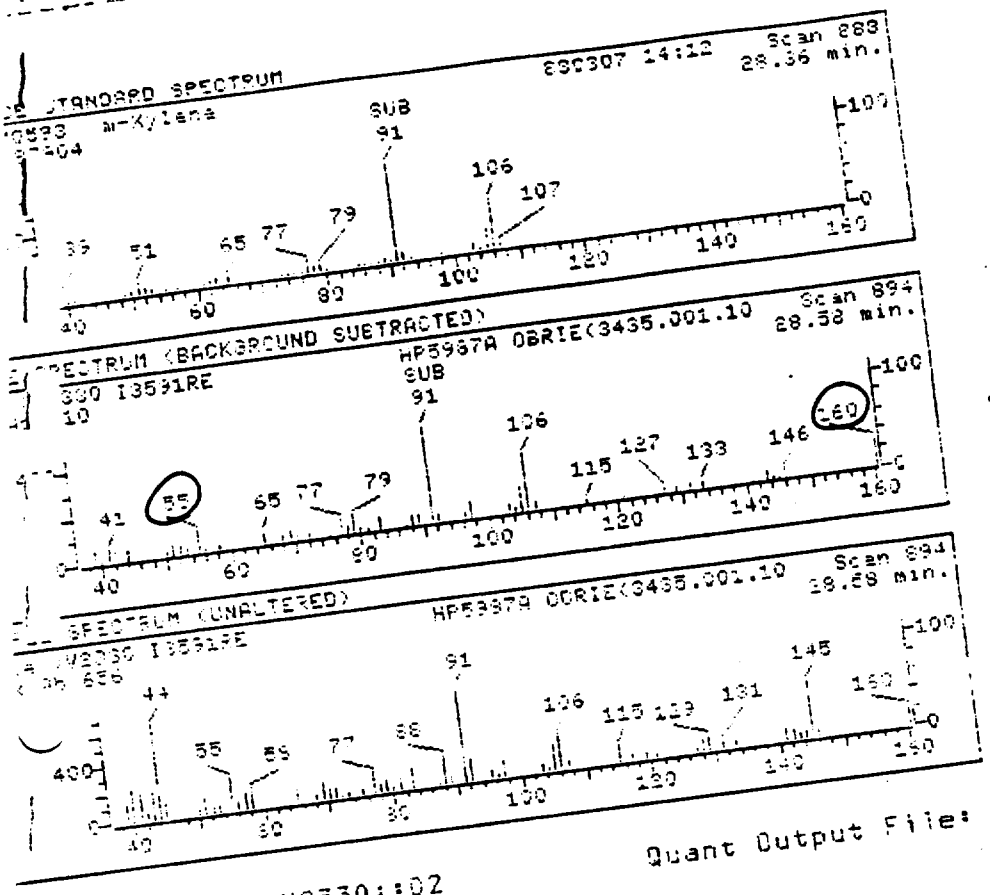


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A 0BRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDUML::EX
Injected at: 890419 11:44 Last Calibration: 890419 10:50

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 185706
Concentration: 226.75 NG
q-value: 90



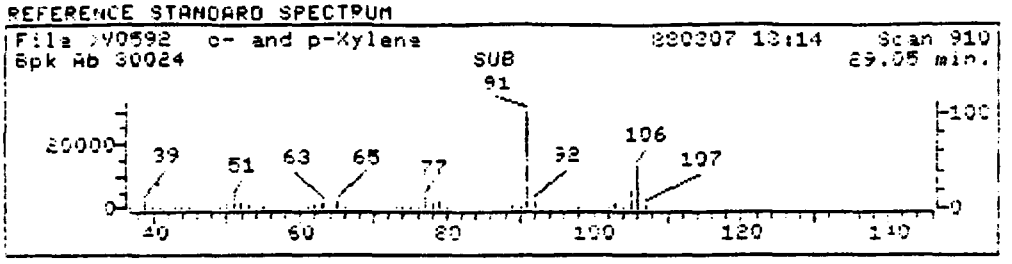
Quant Output File: ^V2330::D1

Data File: >V2330::02
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39
Injected at: 890419 11:44

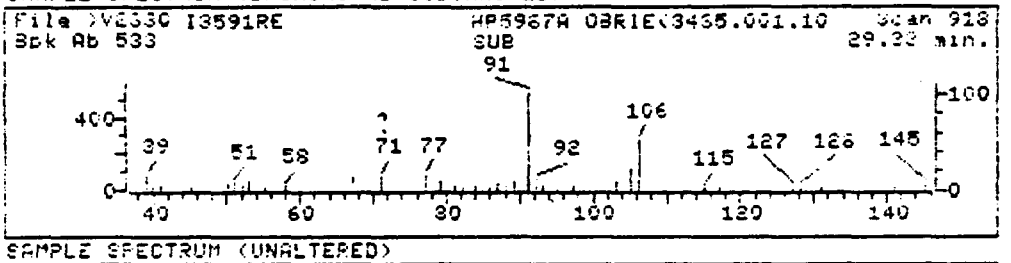
Quant ID File: IDUML::EX
Last Calibration: 890419 10:58

Compound No: 43
Compound Name: m-Xylene
Scan Number: 894
Retention Time: 28.58 min.
Quant Ion: 106.0
Area: 4538
Concentration: 5.06 NG
r-value: 82

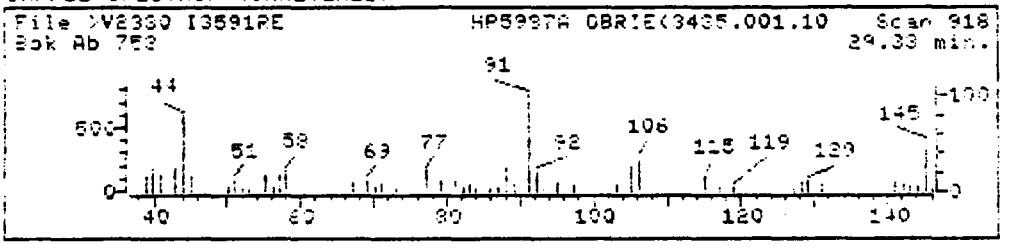
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >V2330::D2 Quant Output File: ^V2330::D1
Name: I3591RE
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 12:39 Quant ID File: IDUML::EX
Injected at: 890419 11:44 Last Calibration: 890419 19:58

Compound No: 44
Compound Name: Xylene (total)
Scan Number: 918
Retention Time: 29.33 min.
Quant Ion: 106.0
Area: 6015
Concentration: 3.21 NG
q-value: 93

QUANT REPORT

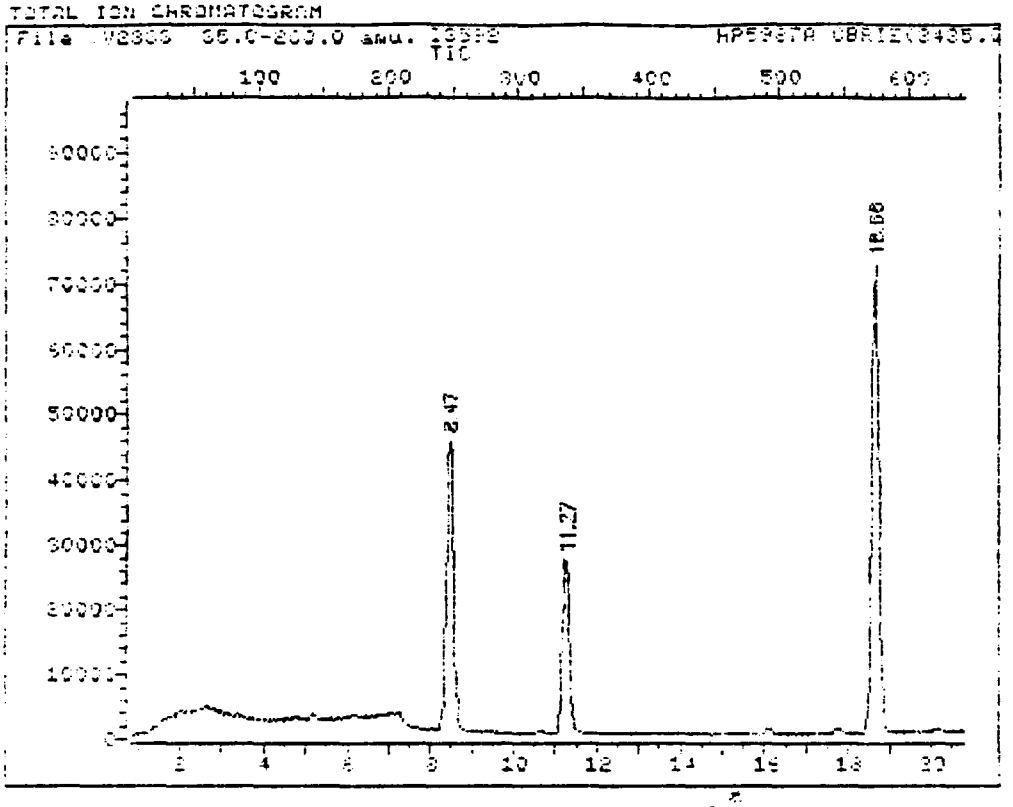
Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 15:41
Output File: ^V2333::D1 Injected at: 890419 14:59
Data File: >V2333::D2 Dilution Factor: 1.00000
Name: 13592
Misc: HP5987A SBRIE(3435.001.100)P1

ID File: IDUML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Best Calibration: 890419 10:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	79887	250.00	NG	97
4)	Methylene Chloride	5.18	84.0	1733	7.23	NG	86
5)	Acetone	6.11	43.0	4269	28.28	NG	90
6)	1,2-Dichloroethane-d4	11.27	65.0	100777	213.46	NG	84
19)	*1,4-Difluorobenzene	18.66	114.0	367040M	250.00	NG	100
29)	2-Butenone	11.39	72.0	1575	26.36	NG	80
7)	Benzene	16.11	78.0	4415	3.03	NG	100
21)	*Chlorobenzene-d5	23.45	117.0	329996M	250.00	NG	97
27)	Toluene-d8	22.24	98.0	388293	226.62	NG	100
28)	Toluene	22.42	92.0	5178	3.21	NG	93
1)	Bromofluorobenzene	27.34	95.0	180427M	216.49	NG	88
44)	m-Xylene	26.62	106.0	2573M	2.31	NG	41
46)	Xylene (total)	26.33	106.0	32554	4.36	NG	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



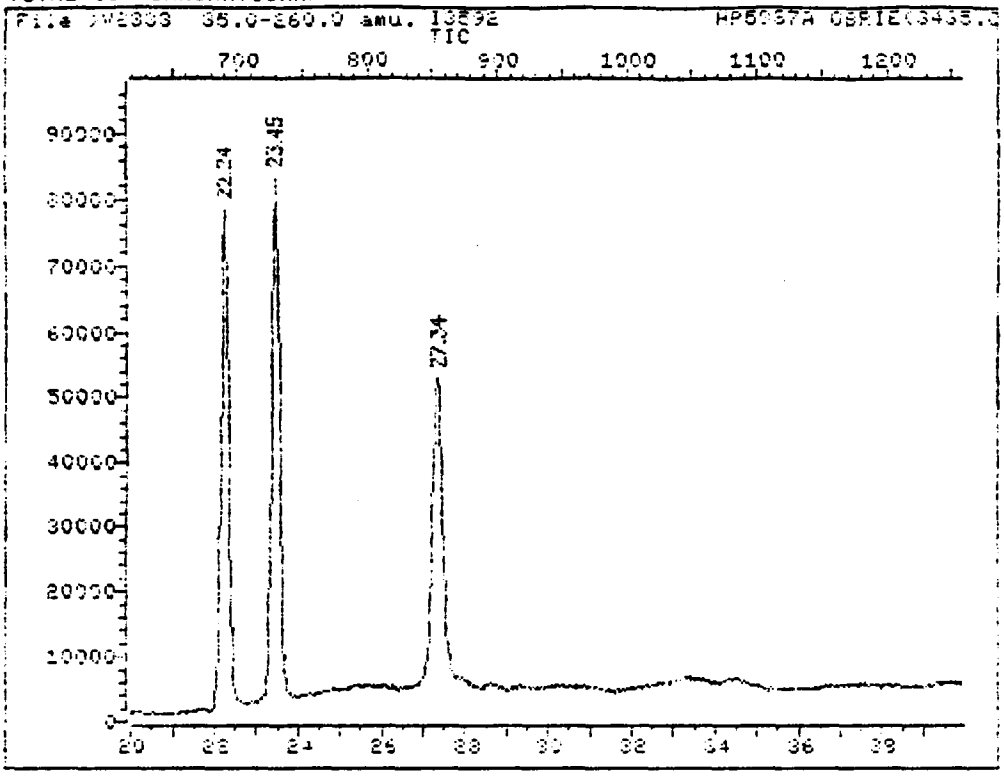
Data File: >V2333::D2 Quant Output File: >V2333::D1
Name: I5592
Misc: HP5987A OBRIE(3435.001.100)#1

Id File: IDVML::EX
Title: CLP VOA IC FILE (PACKED COLUMN)
Last Calibration: 890419 10:52

Operator ID: KAREN
Quant Time: 890419 15:41
Injected at: 890419 14:50

TIC page 1 of 2

TOTAL ION CHROMATOGRAM



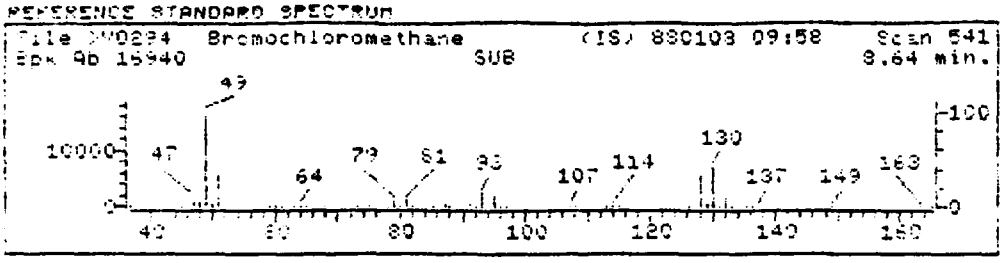
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A GBRIE(3435.001.100)P1

Id File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:53

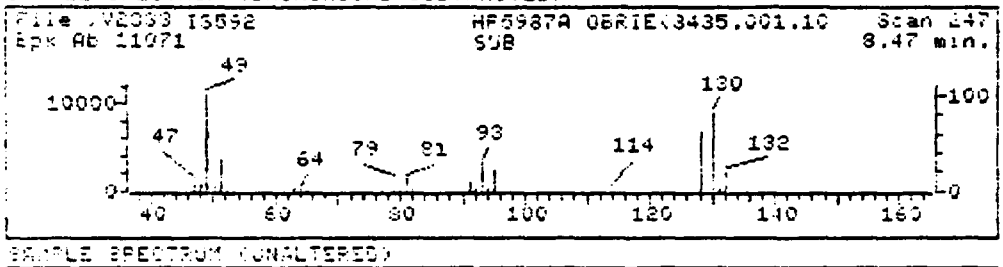
Operator ID: KAREN
Quant Time: 890419 15:41
Injected at: 890419 14:50

TIC page 2 of 2

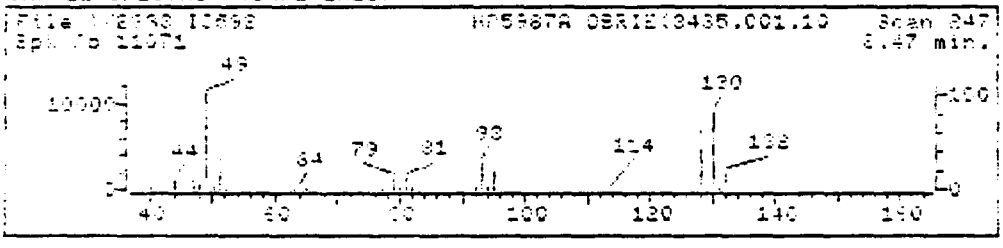
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



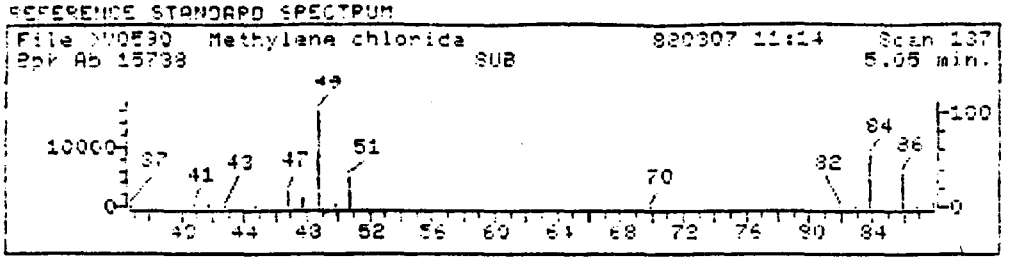
SAMPLE SPECTRUM (UNALTERED)



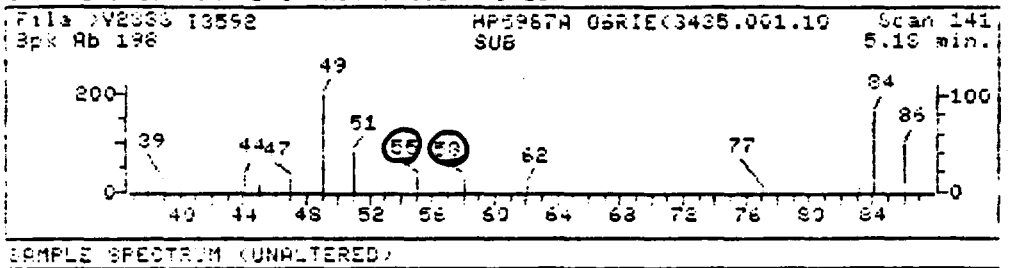
Data File: >V2333::02 Quant Output File: >V2333::01
Name: I3592
Misc: HP5987A OBRIE(3435.001.10)P1
Quant Time: 880419 15:41 Quant ID File: IDUNL::EX
Injected at: 880419 14:50 Last Calibration: 880419 10:58

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 247
Retention Time: 8.47 min.
Quant Ion: 128.0
Area: 79887
Concentration: 250.00 NG
q-value: 97

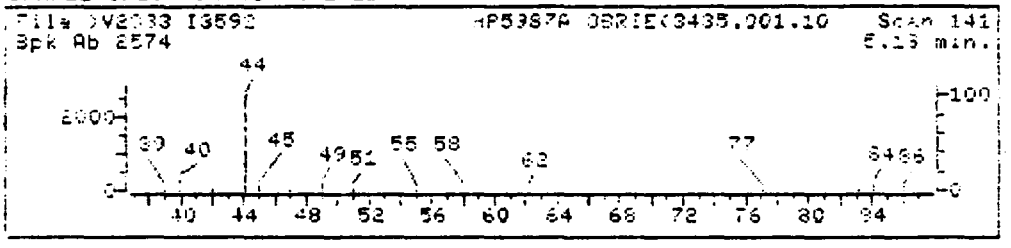
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



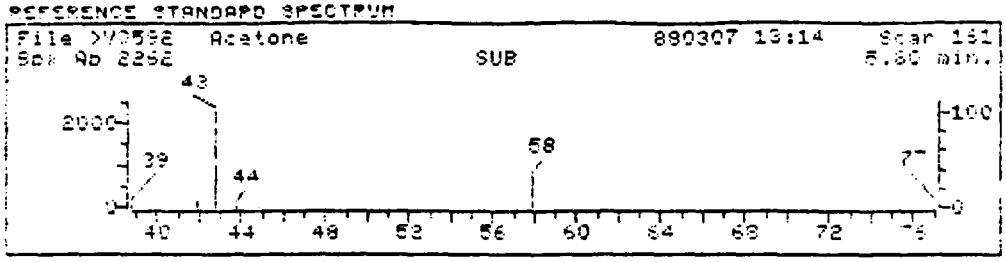
SAMPLE SPECTRUM (UNALTERED)



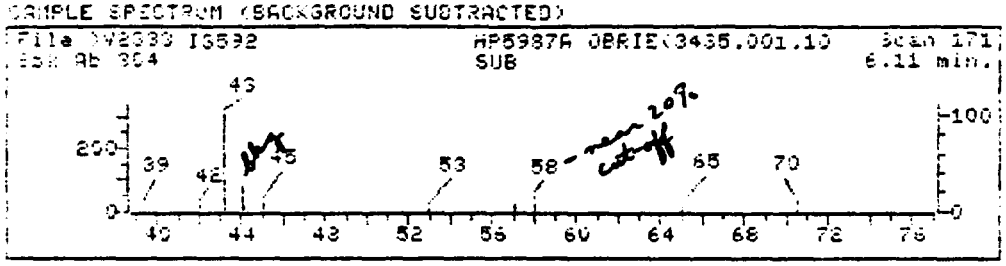
Data File: >V2333::02 Quant Output File: ^V2333::01
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDUML::EX
Injected at: 890419 14:30 Last Calibration: 890419 10:59

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 141
Retention Time: 5.18 min.
Quant Ion: 84.0
Area: 1673
Concentration: 3.23 NG
q-value: 80

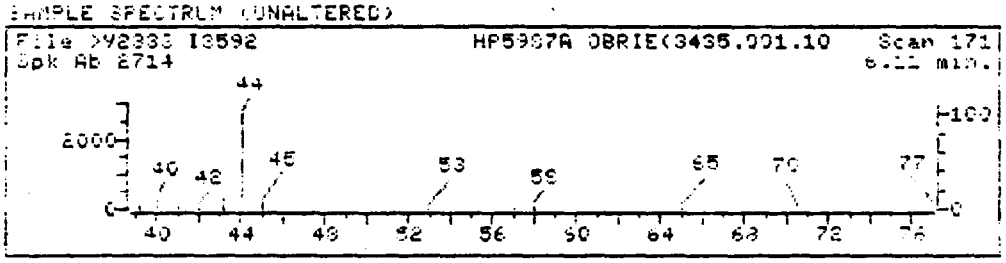
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



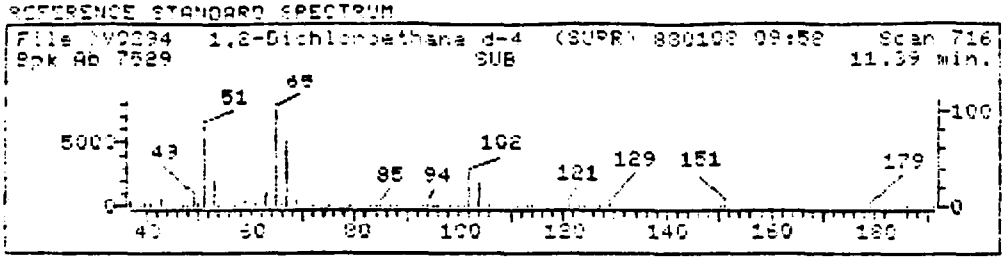
SAMPLE SPECTRUM (UNALTERED)



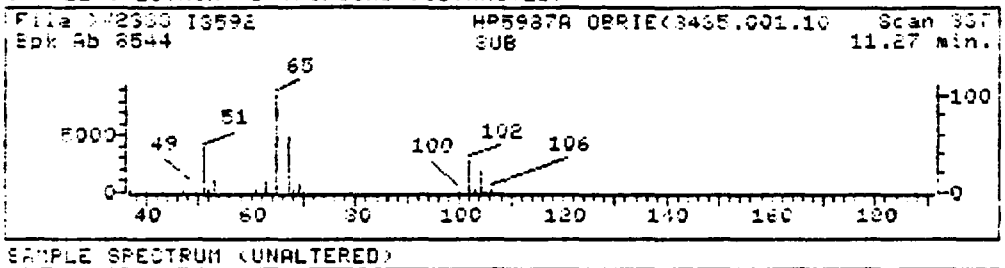
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDVML::D>
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 7
Compound Name: Acetone
Scan Number: 171
Retention Time: 6.11 min.
Quant Ion: 43.0
Area: 4259
Concentration: 28.28 NG
q-value: 90

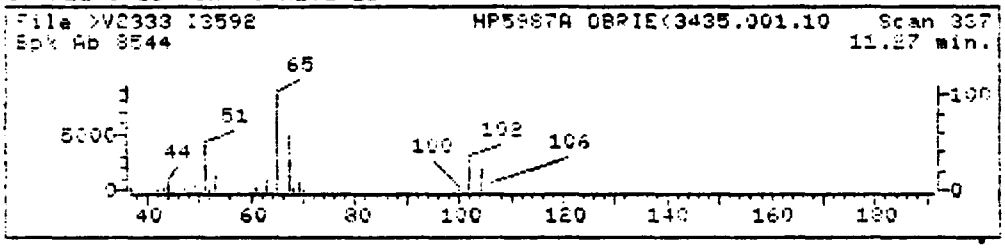
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



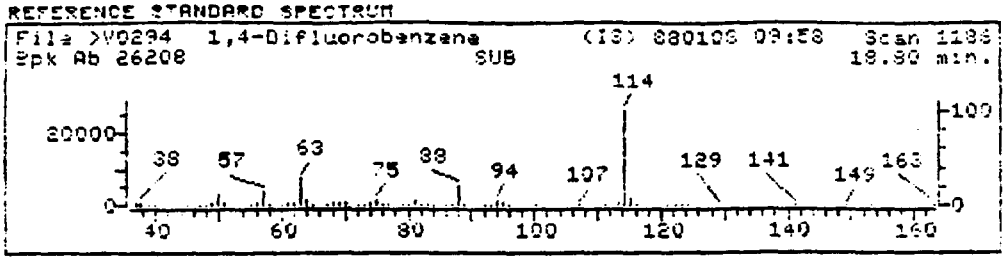
SAMPLE SPECTRUM (UNALTERED)



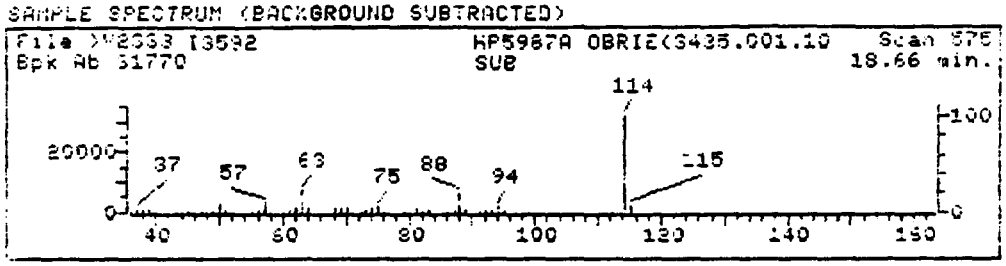
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: ID\ML::EA
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 337
Retention Time: 11.27 min.
Quant Ion: 65.0
Area: 100777
Concentration: 213.46 NG
q-value: 86

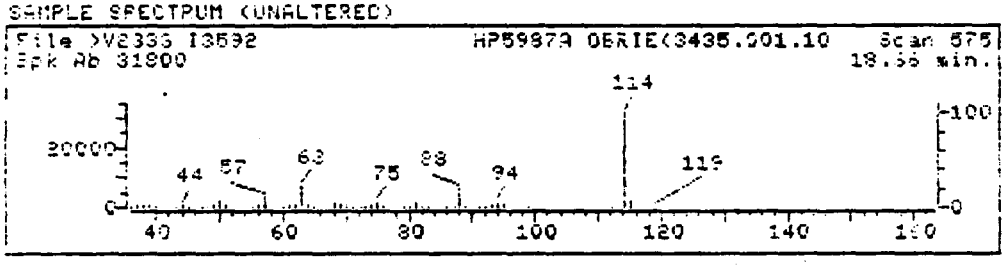
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



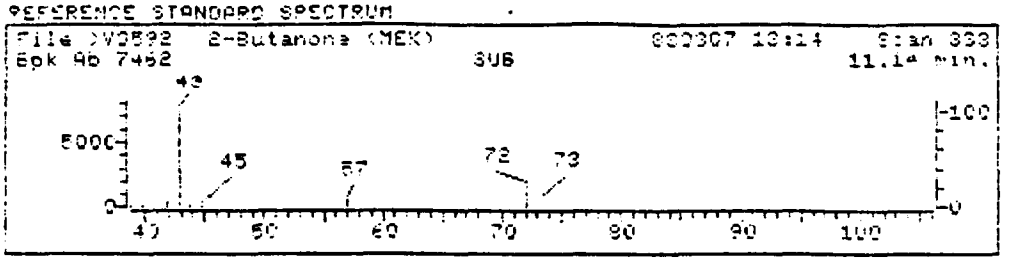
SAMPLE SPECTRUM (UNALTERED)



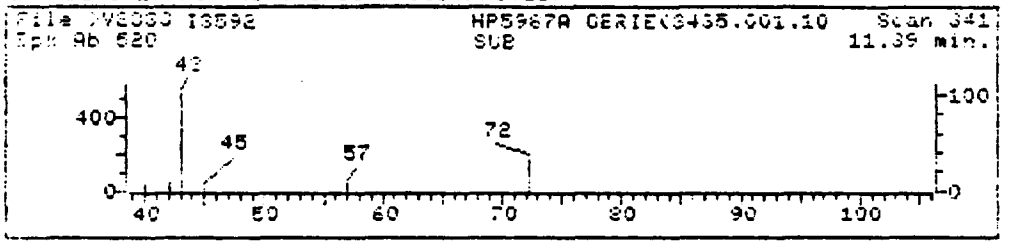
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDVML::ER
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 575
Retention Time: 18.66 min.
Quant Ion: 114.0
Area: 367040M
Concentration: 250.00 NG
q-value: 100

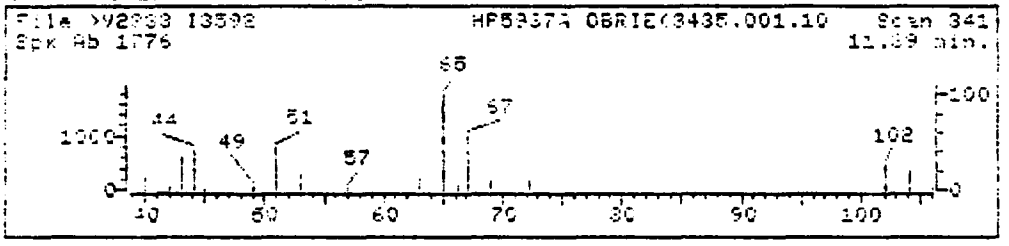
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



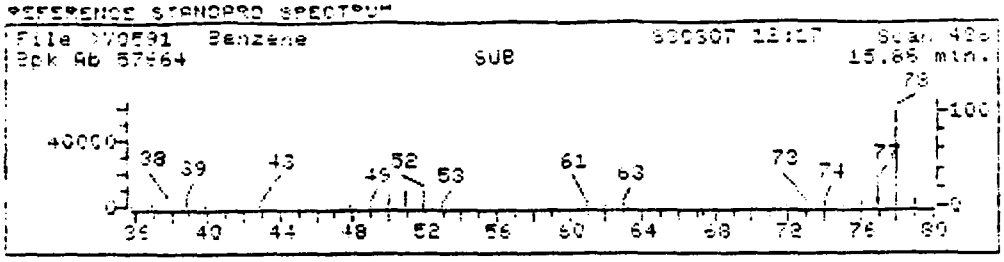
SAMPLE SPECTRUM (UNALTERED)



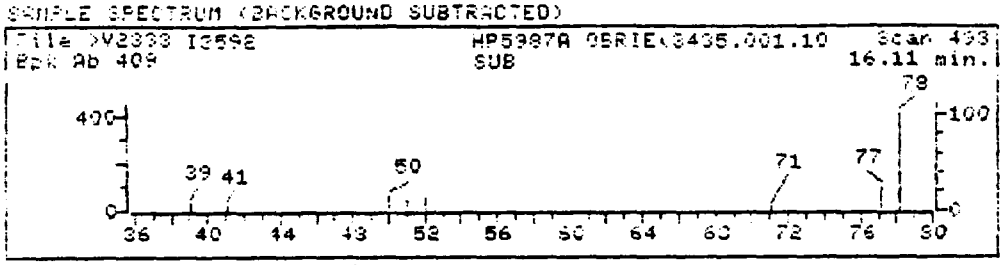
Data File: >V2333::D2 Quant Output File: ^V2333::Q1
Name: I3592
Misc: HP5987A GBRIE:3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: I3UML::EX
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 19
Compound name: 2-Butanone
Scan Number: 341
Retention Time: 11.39 min.
Quant Ion: 72.0
Area: 1575
Concentration: 26.36 NG
Qvalue: 80

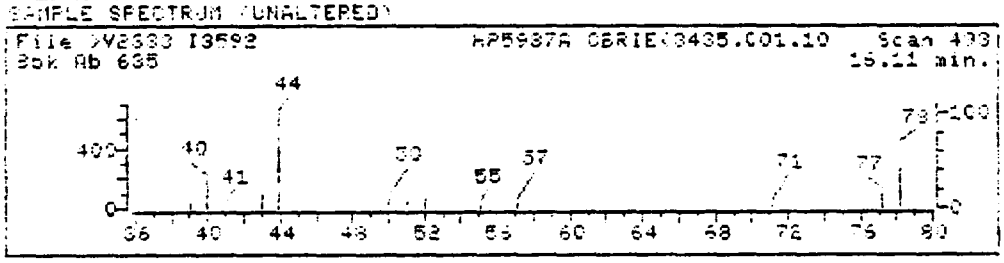
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



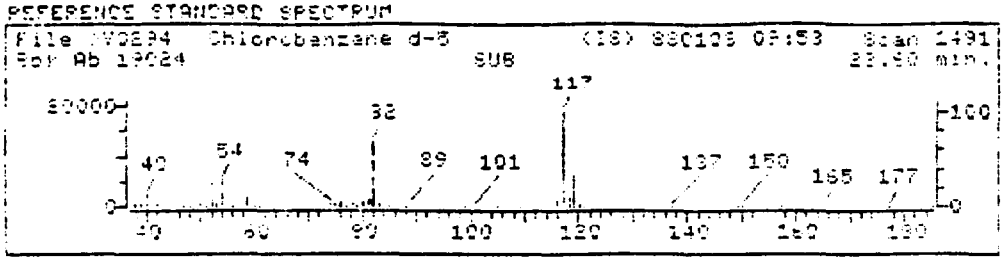
SAMPLE SPECTRUM (UNALTERED)



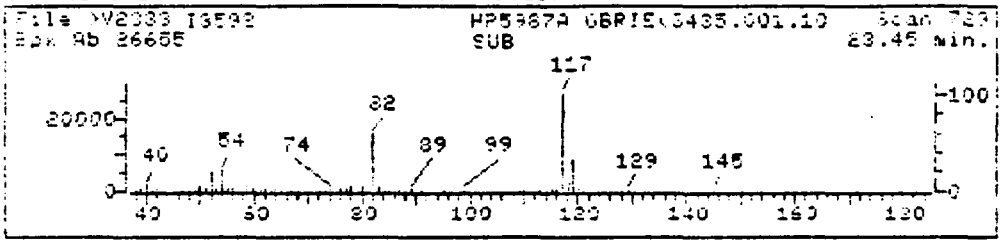
Data File: >V2333::D2 Quant Output File: >V2333::D1
Name: I3592
Misc: HP5987A OBRIE\3435.001.100;P1
Quant Time: 990419 15:41 Quant ID File: 10:ML::5A
Injected at: 990419 14:50 Last Calibration: 990419 10:59

Compound No: 27
Compound Name: Benzene
Scan Number: 493
Retention Time: 16.11 min.
Quant Ion: 78.0
Area: 4415
Concentration: 3.03 NG
q-value: 100

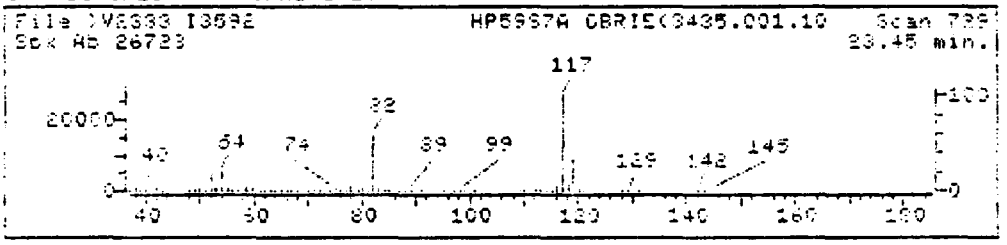
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



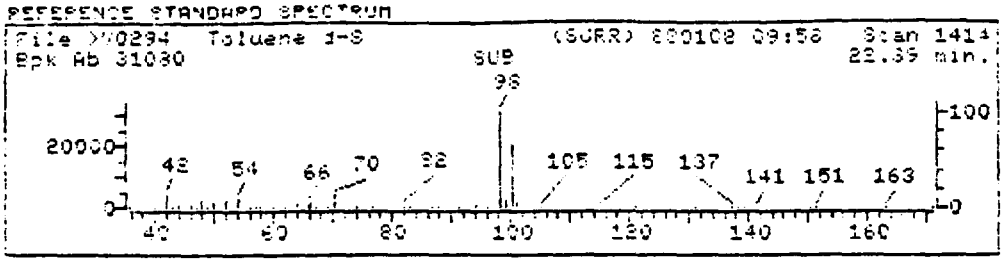
SAMPLE SPECTRUM (UNALTERED)



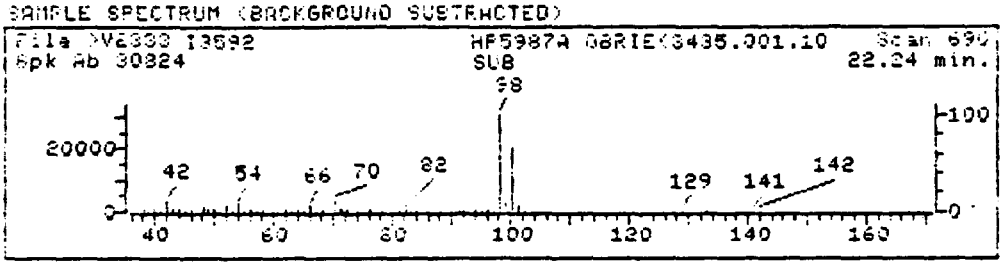
Data File: >V2333::C2 Quant Output File: ^J2333::D1
Name: I3692
Misc: HP59987A CBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDUMP::E:
Injected at: 890419 14:50 Last Calibration: 890419 10:30

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 329996.1
Concentration: 250.00 NG
q-value: 97

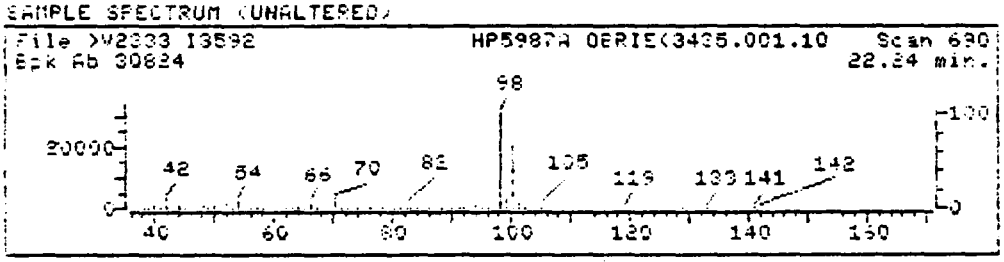
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



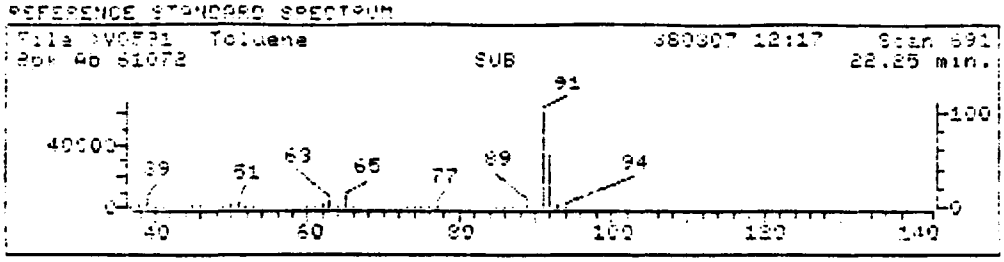
SAMPLE SPECTRUM (UNALTERED)



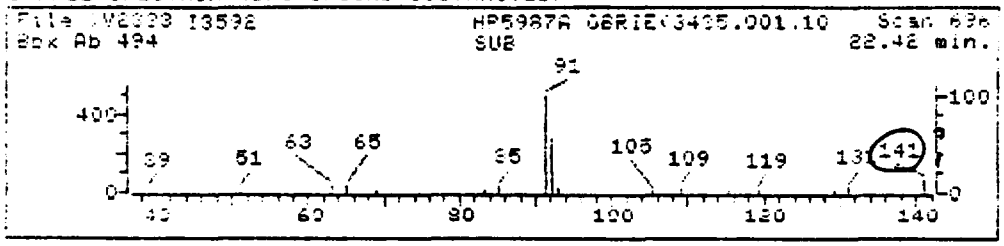
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A 0BRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDJM_::03
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.24 min.
Quant Ion: 98.0
Area: 388295
Concentration: 226.62 NG
q-value: 100

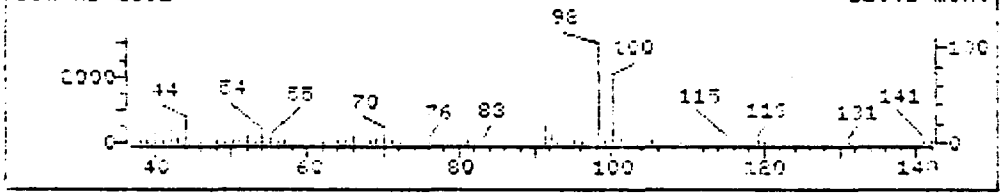
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



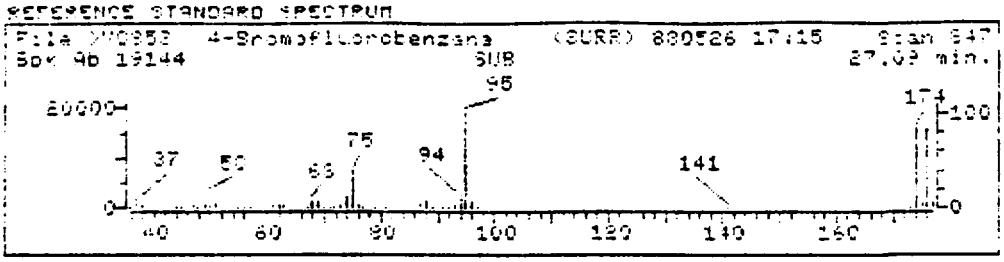
SAMPLE SPECTRUM (UNALTERED)



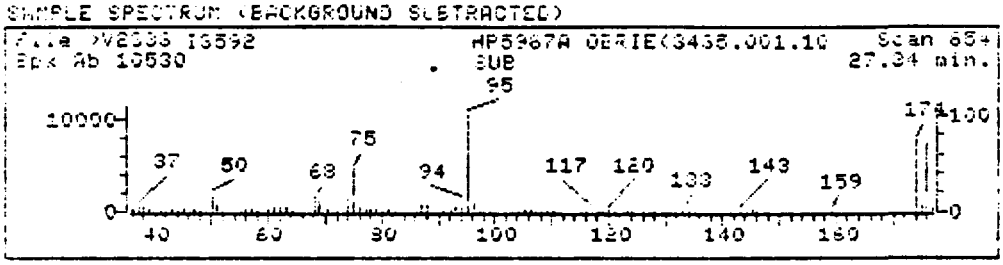
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDVML::EX
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 33
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 92.0
Area: 5178
Concentration: 5.01 NG
%value: 97

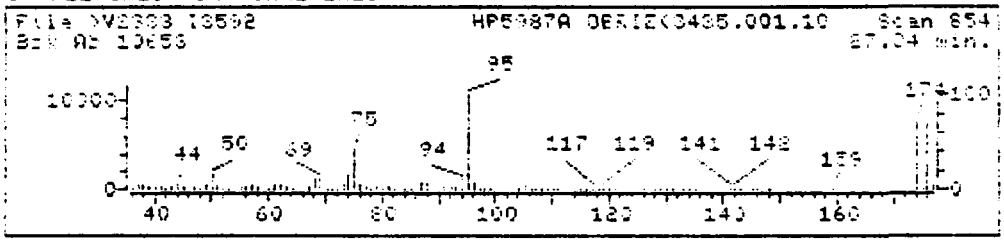
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



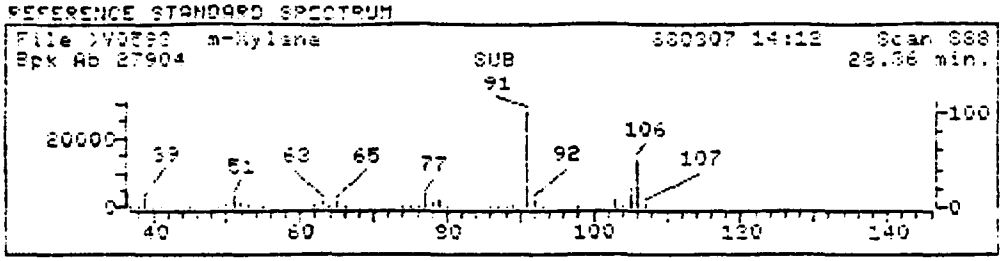
SAMPLE SPECTRUM (UNALTERED)



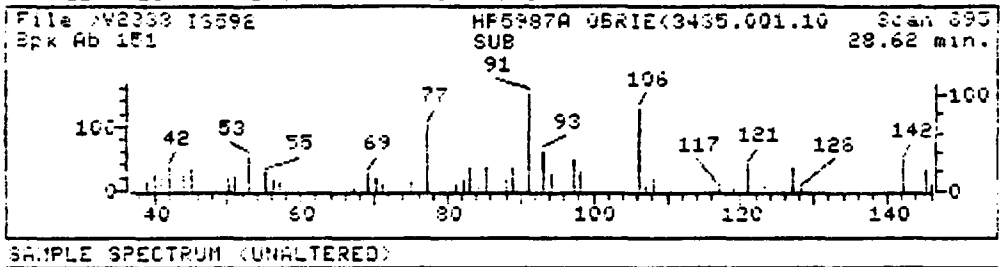
Data File: >V2333::D2 Quant Output File: `V2333::D1
Name: I3592
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: ID<ML::2<
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: -1
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 180427M
Concentration: 216.49 NG
q-value: 98

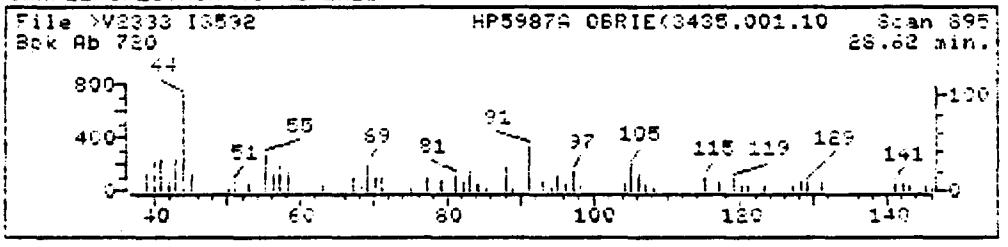
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



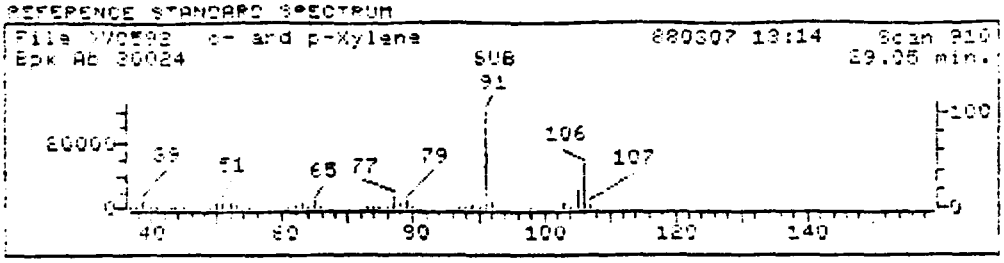
SAMPLE SPECTRUM (UNALTERED)



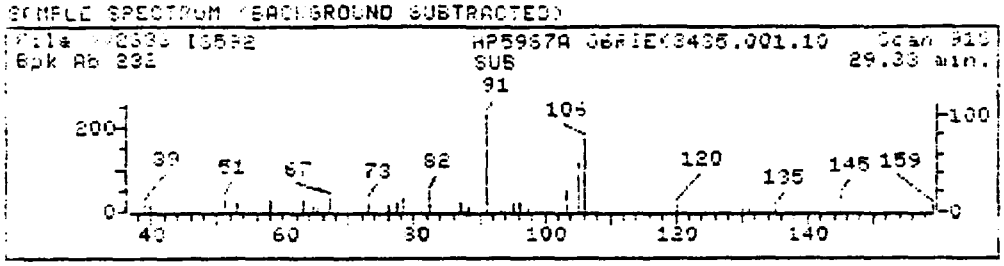
Data File: >V2333::D2 Quant Output File: ^V2333::D1
Name: I3592
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: IDVML::EX
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 43
Compound Name: m-Xylene
Scan Number: 895
Retention Time: 28.62 min.
Quant Ion: 106 0
Area: 2653M
Concentration: 2.91 NG
q-value: 41

REFERENCE STANDARD SPECTRUM

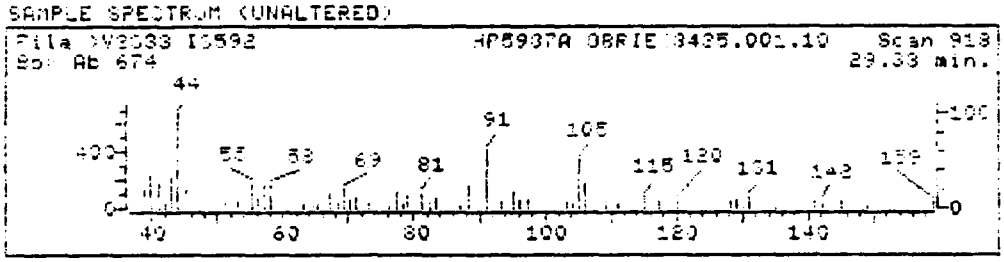


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



X

SAMPLE SPECTRUM (UNALTERED)



Data File: >V0333::D2 Quant Output File: ^V0333::D1
Name: I3592
Misc: HP5937A OBRIE(3435.001.100)P1
Quant Time: 890419 15:41 Quant ID File: [OVOL.]:EX
Injected at: 890419 14:50 Last Calibration: 890419 10:58

Compound No: 44
Compound Name: Xylene (total)
Scan Number: 918
Retention Time: 29.33 min.
Quant Ion: 106.0
Area: 5265M
Concentration: 4.38 NG
q-value: 52

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 16:21
Output File: ^V2334::01 Injected at: 890419 15:45
Data File: >V2334::02 Dilution Factor: 1.00000
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1

ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:53

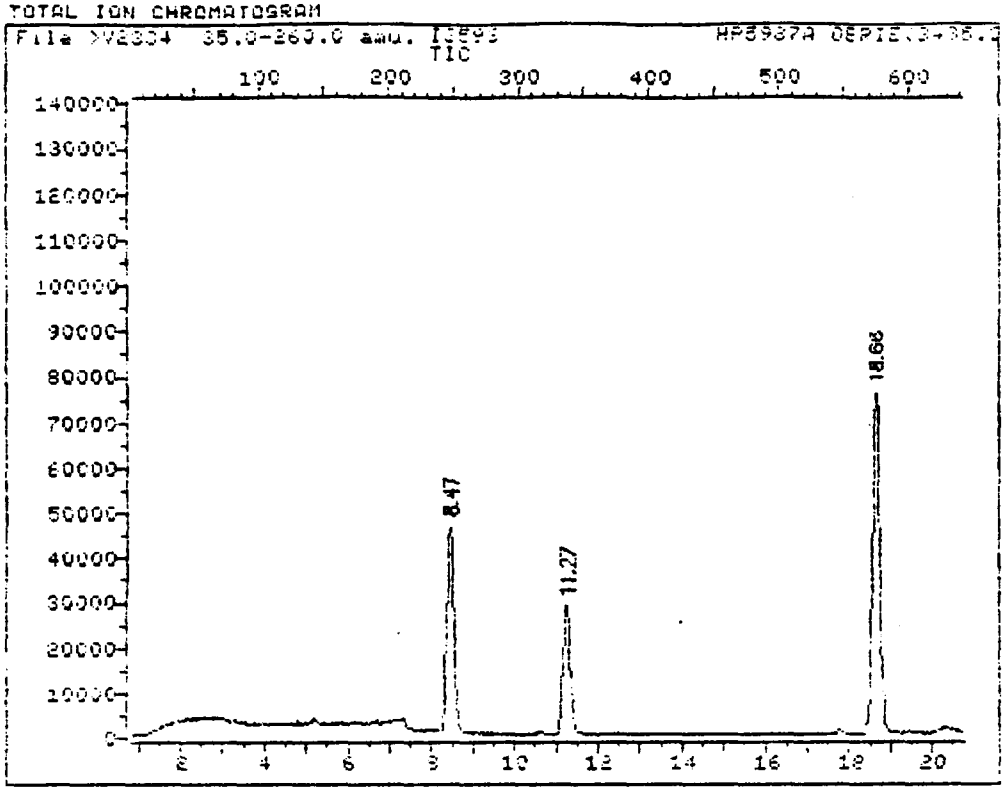
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	81591	250.00	NG	99
6)	Methylene Chloride	5.18	84.0	3012	5.69	NG	71
~~7)~~	~~Acetone~~	~~6.14~~	~~43.0~~	~~21934~~	~~17.47~~	~~NG~~	~~91~~
15)	1,2-Dichloroethane-d4	11.27	65.0	105034	217.83	NG	86
18)	*1,4-Difluorobenzene	18.66	114.0	384418M	250.00	NG	100
~~19)~~	~~2-Butanone~~	~~11.36~~	~~72.0~~	~~13776~~	~~21.75~~	~~NG~~	~~87~~
32)	*Chlorobenzene-d5	23.45	117.0	339117M	250.00	NG	78
~~47)~~	~~4-Methyl-2-pentanone~~	~~18.17~~	~~43.0~~	~~58214~~	~~91.73~~	~~NG~~	~~88~~
57)	Toluene-d8	22.23	98.0	379044M	215.39	NG	100
3)	Toluene	22.42	92.0	27326	25.16	NG	98
10)	Ethylbenzene	25.32	106.0	33233M	51.76	NG	97
41)	Bromofluorobenzene	27.34	95.0	210804M	246.13	NG	77
~~53)~~	~~m-Xylene~~	~~28.62~~	~~106.0~~	~~77228M~~	~~96.37~~	~~NG~~	~~94~~
54)	Xylene (total)	29.37	106.0	73609M	96.08	NG	94

* Compound is ISTD

Total Xylene = $\frac{(77228 + 73609)}{339117} \times \frac{250}{0.69150} \times \frac{10000/100}{(3.9661)(0.541)} =$

7494.54 ug/kg

TOTAL ION CHROMATOGRAM



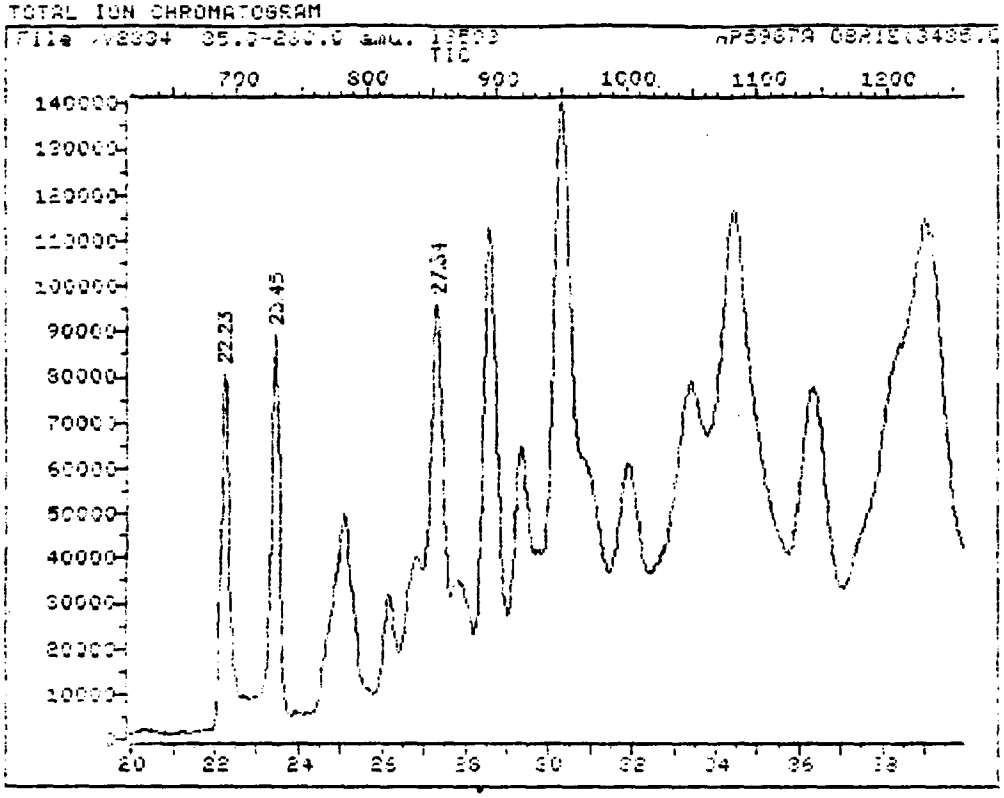
Data File: >V2334::D2 Quant Output File: >V2334::01
Name: I5F03
Misc: HP5987A CBPIE(3435.001.100)F1

Id File: IDUML::EK
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 16:51
Injected at: 890419 15:45

TIC page 1 of 2

TOTAL ION CHROMATOGRAM



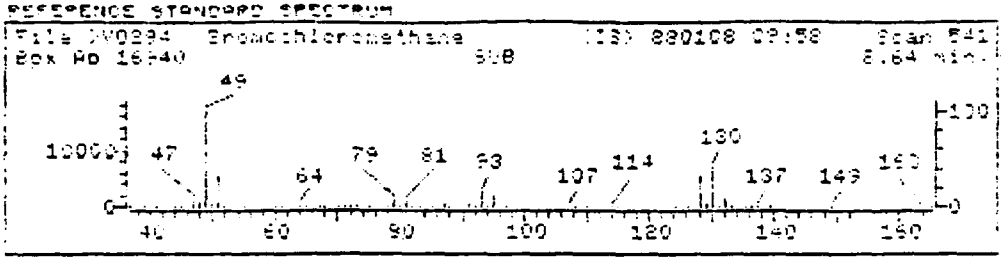
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: 35553
Misc: HP5987A OBRIE(3435.001.100)P1

Id File: IDVPL::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:53

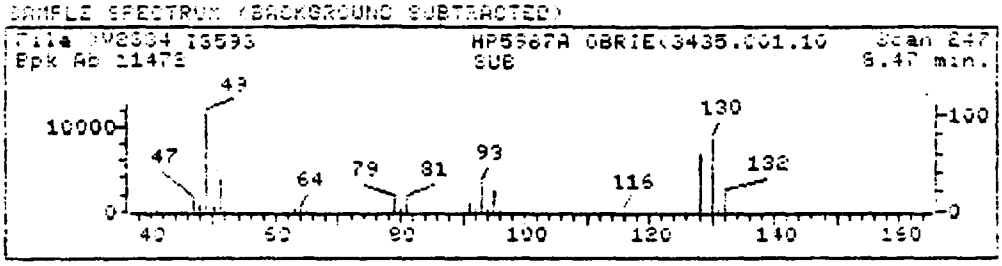
Operator ID: KAREN
Quant Time: 890419 16:51
Injected at: 890419 15:45

TIC page 2 of 2

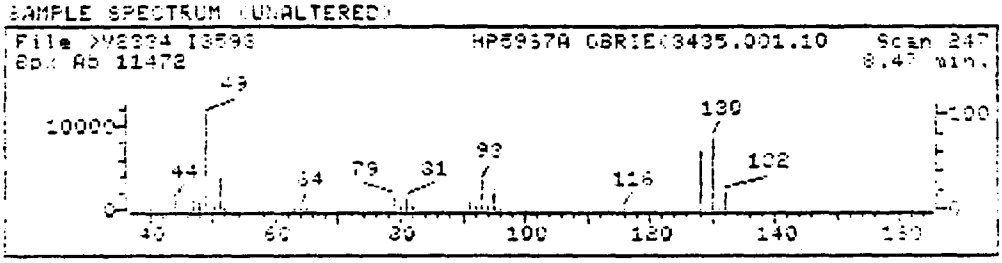
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



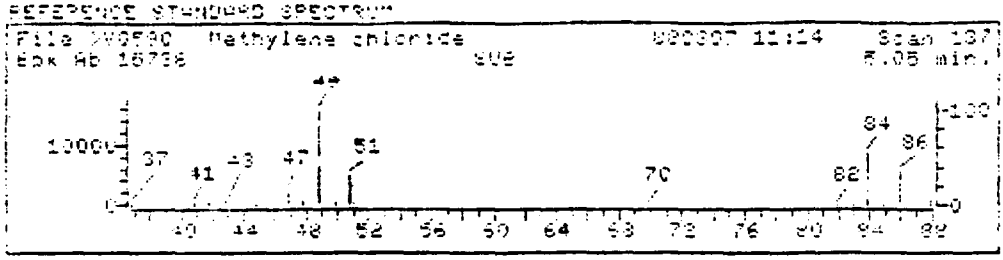
SAMPLE SPECTRUM (UNALTERED)



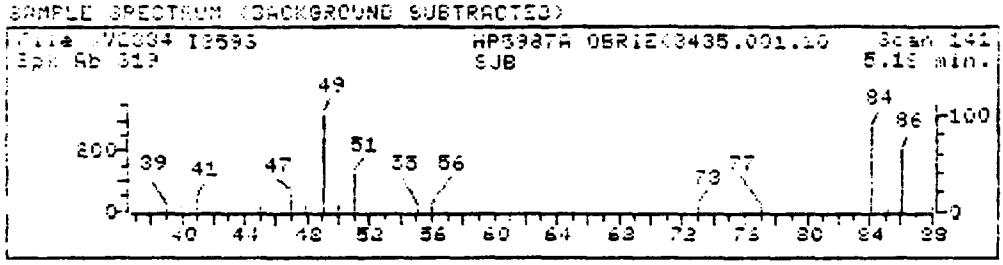
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3597
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDUML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:59

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 247
Retention Time: 8.47 min.
Quant Ion: 128.0
Area: 81591
Concentration: 250.00 NG
r-value: 99

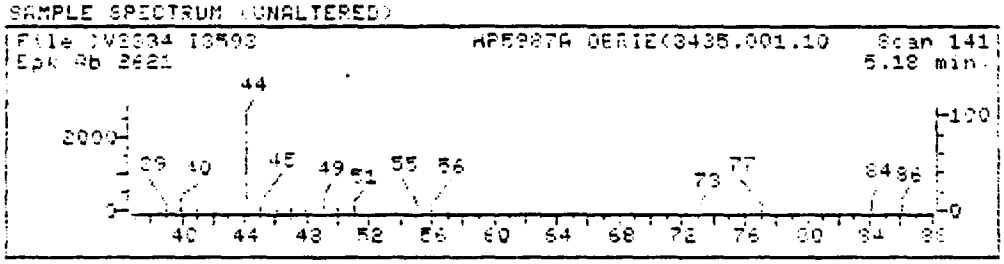
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



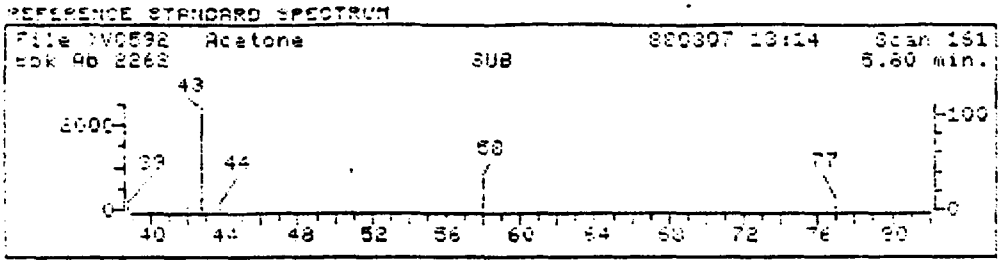
SAMPLE SPECTRUM (UNALTERED)



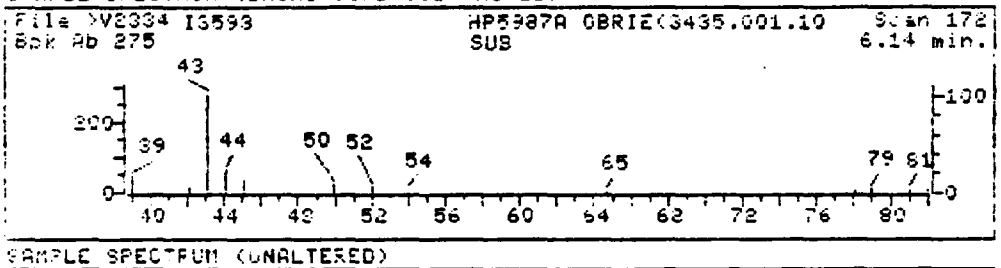
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: [illegible]
Misc: HP5987A 08RIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: ID\ML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:55

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 141
Retention Time: 5.18 min.
Quant Ion: 84.0
Area: 3012
Concentration: 5.69 NG
q-value: 71

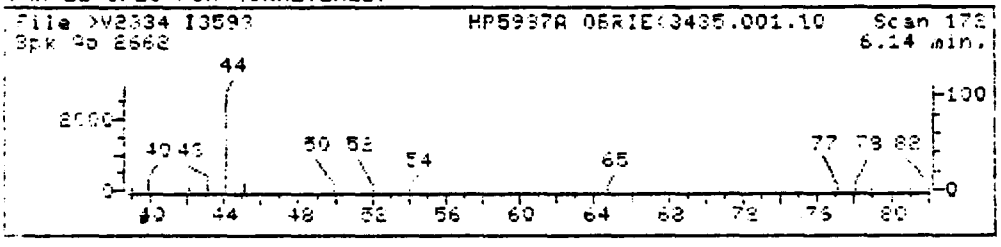
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



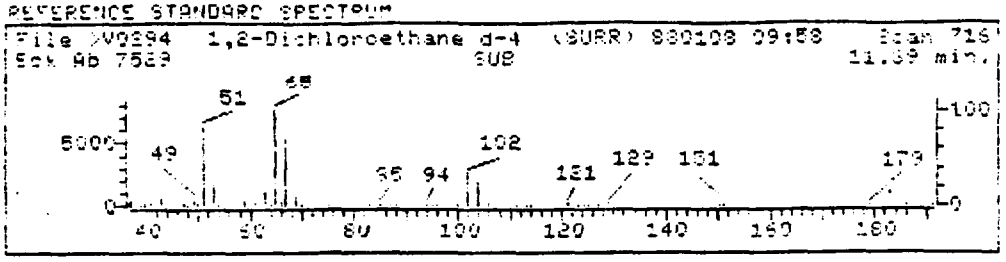
SAMPLE SPECTRUM (UNALTERED)



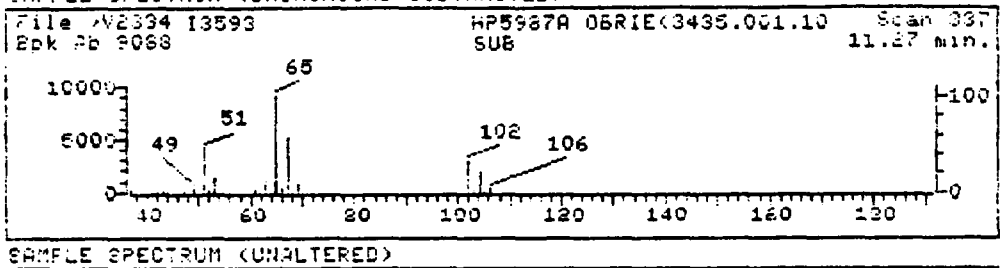
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDUML::EY
Injected at: 890419 15:45 Last Calibration: 890419 10:59

Compound No: 7
Compound Name: Acetone
Scan Number: 172
Retention Time: 6.14 min.
Quant Ion: 43.0
Area: 2695M
Concentration: 17.47 NG
q-value: 52

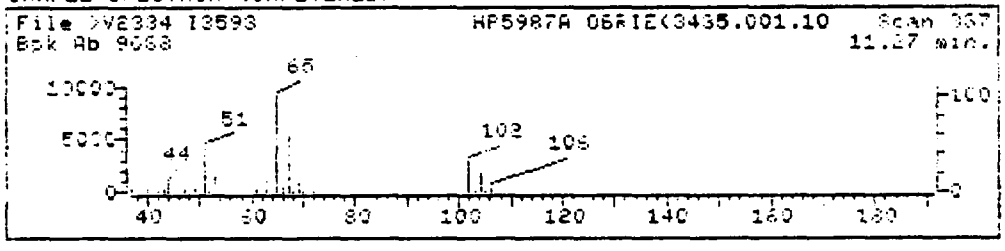
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



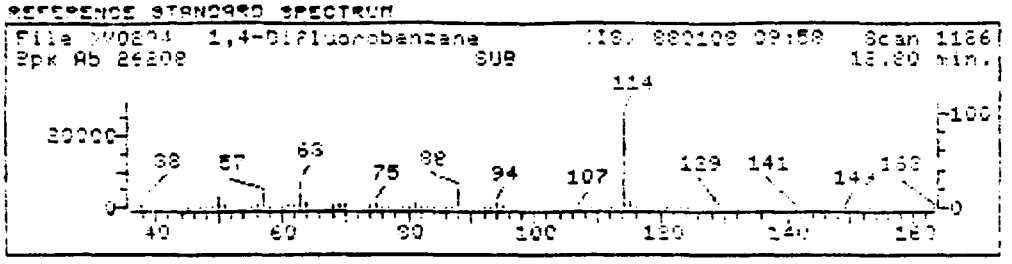
SAMPLE SPECTRUM (UNALTERED)



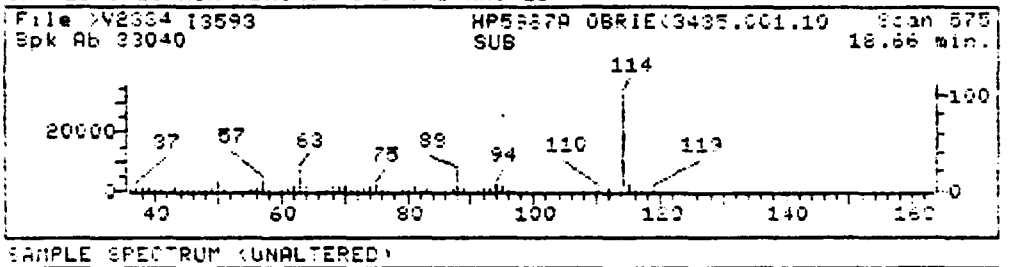
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDVML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:58

Compound No: 19
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 337
Retention Time: 11.27 min.
Quant Ion: 65.0
Area: 105034
Concentration: 217.93 NG
q-value: 86

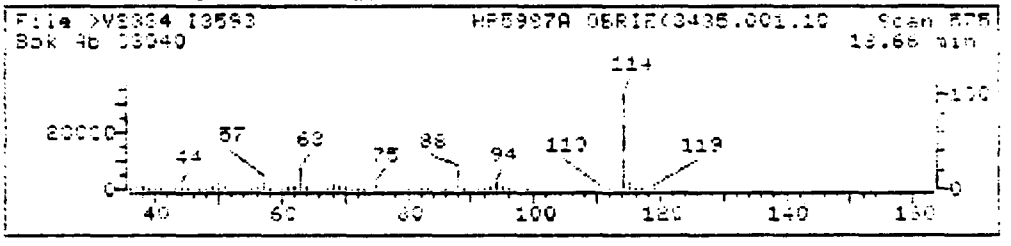
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



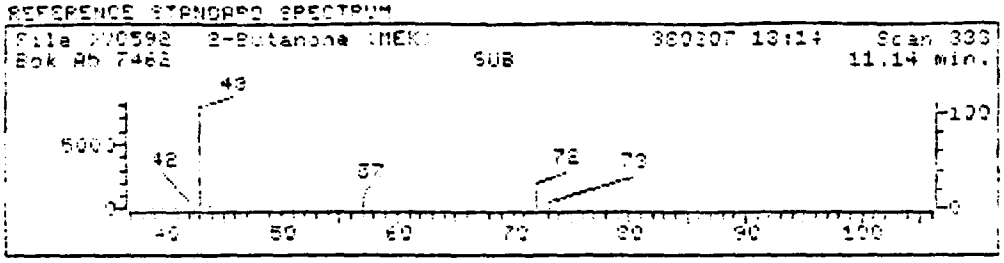
SAMPLE SPECTRUM (UNALTERED)



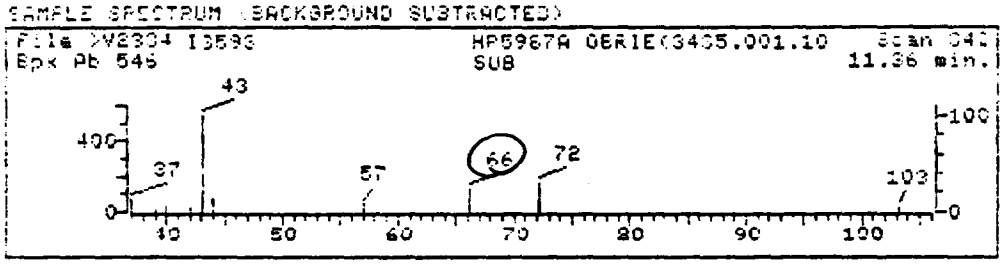
Data File: >V2334::D2 Quant Output File: >V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100);F1
Quant Time: 890419 16:51 Quant ID File: IDUNL::LA
Injected at: 890419 15:45 Last Calibration: 890419 10:52

Compound No: 13 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 575
Retention Time: 18.66 min.
Quant Ion: 114.0
Area: 534418M
Concentration: 250.00 NG
q-value: 100

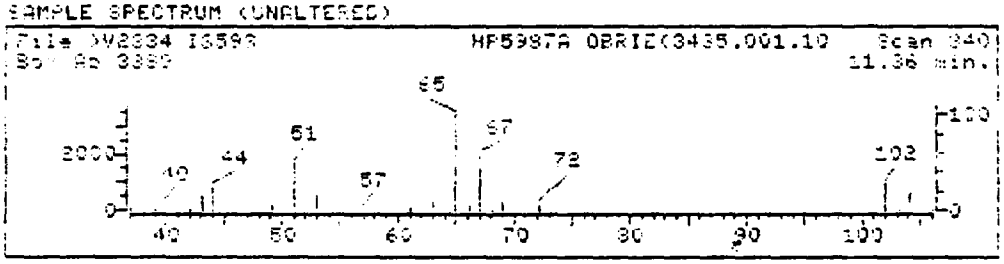
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



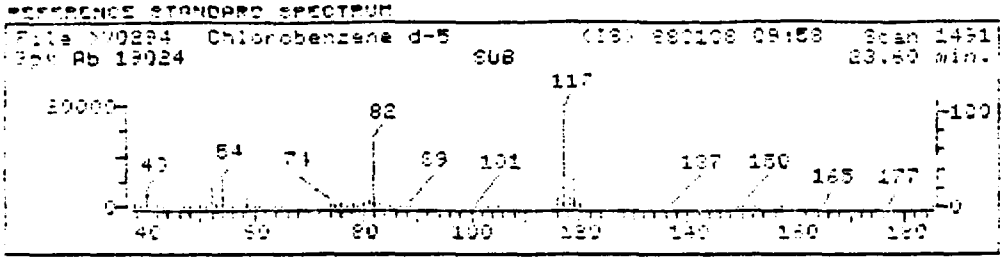
SAMPLE SPECTRUM (UNALTERED)



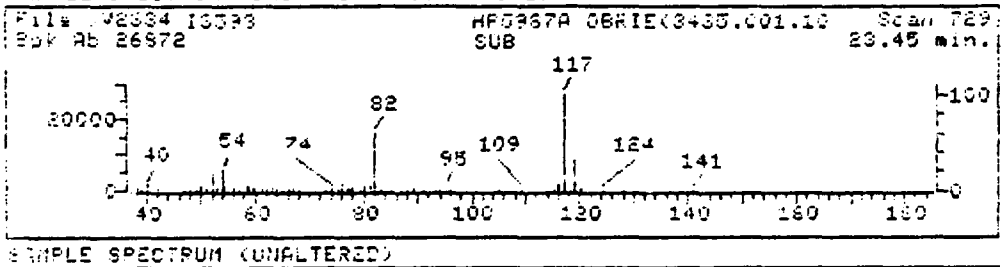
Data File: >V2334::02 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDVML::EK
Injected at: 890419 13:45 Last Calibration: 890419 10:56

Compound No: 19
Compound Name: 2-Butanone
Scan Number: 340
Retention Time: 11.36 min.
Quant Ion: 72.0
Area: 1376
Concentration: 21.99 NG
q-value: 92

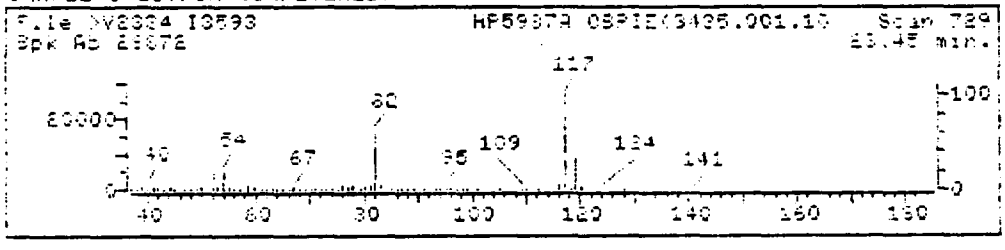
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



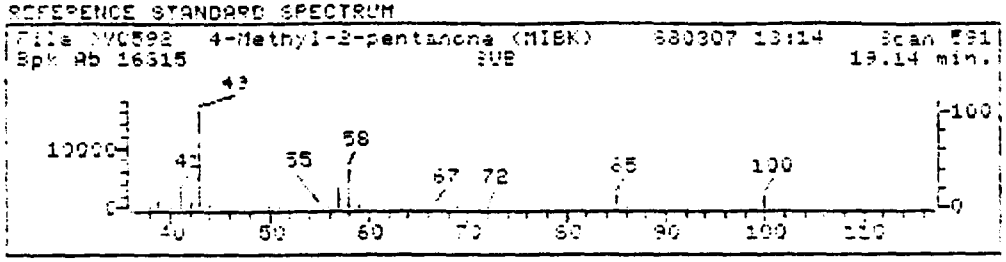
SAMPLE SPECTRUM (UNALTERED)



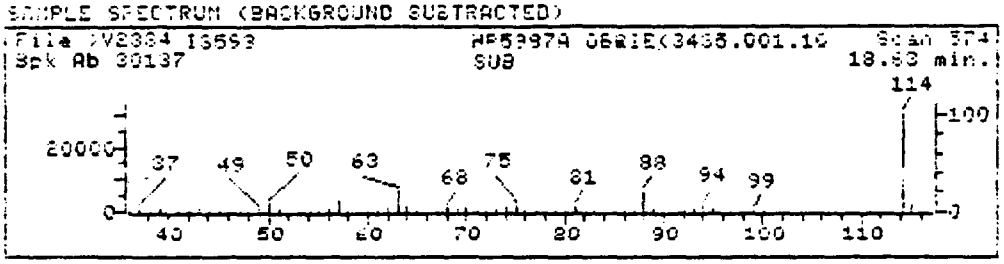
Data File: >V0334::D2 Quant Output File: ^V0334::D1
Name: I0393
Misc: HP5987A 08RIE(3435.001.10)P1
Quant Time: 890419 16:51 Quant ID File: IDVPL::EN
Injected at: 890419 15:45 Last Calibration: 890419 17:50

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 539117M
Concentration: 250.00 NG
q-value: 98

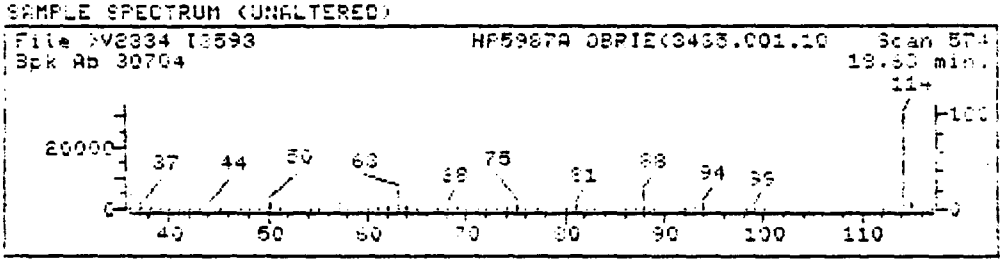
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



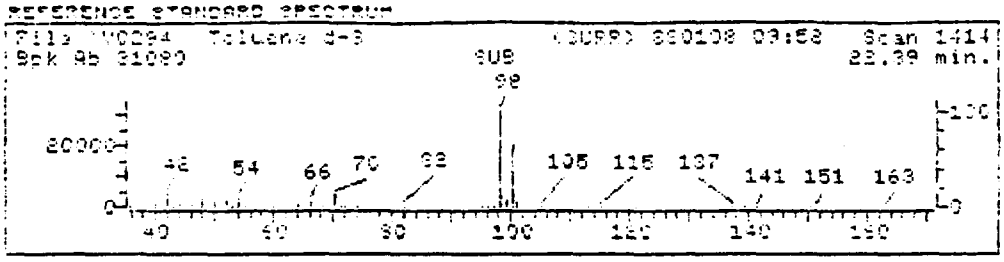
SAMPLE SPECTRUM (UNALTERED)



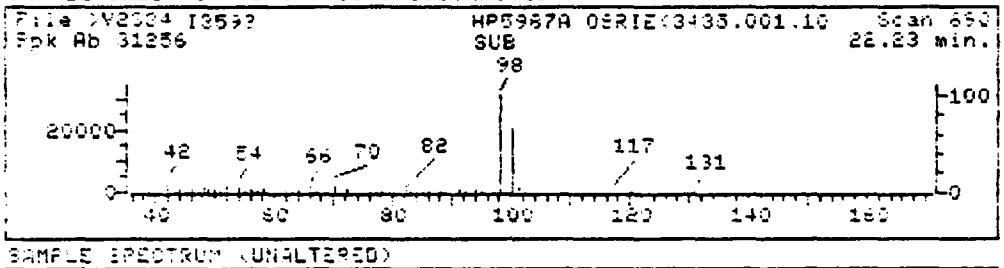
Data File: >V2334::D2 Quant Output File: >V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3433.001.100);F1
Quant Time: 890419 16:51 Quant ID File: IDWNL::EI
Injected at: 890419 15:45 Last Calibration: 890419 10:58

Compound No: 37
Compound Name: 4-Methyl-2-pentanone
Scan Number: 574
Retention Time: 18.63 min.
Quant Ion: 43.0
Area: 3214
Concentration: 8.37 NG
q-value: 85

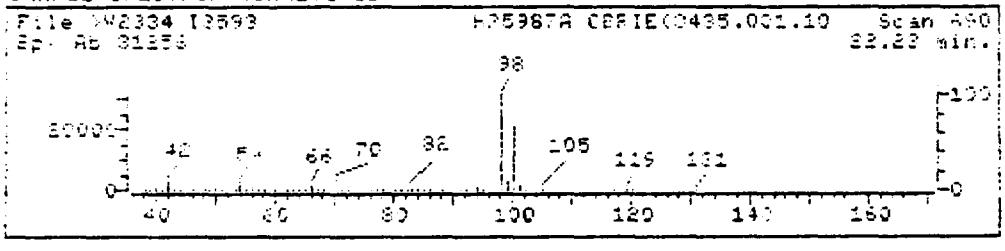
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



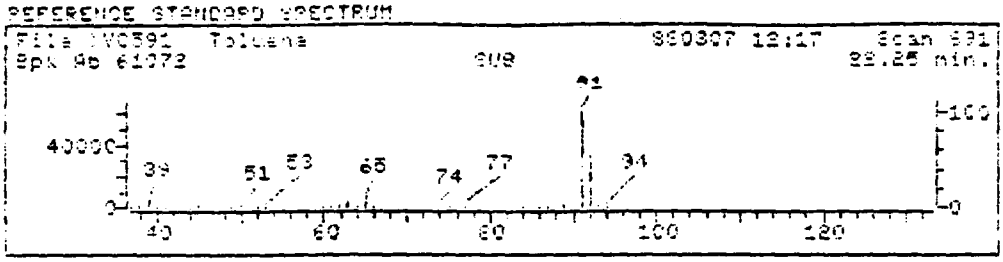
SAMPLE SPECTRUM (UNALTERED)



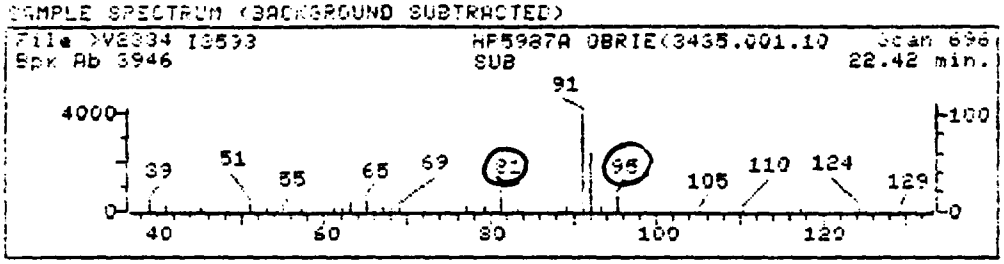
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I359?
Misc: HP5987A QSRIE(5435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDVML::QX
Injected at: 890419 15:45 Last Calibration: 890419 16:5?

Compound No: 57
Compound Name: Toluene-d8
Scan Number: 69?
Retention Time: 22.23 min
Quant Ion: 98.0
Area: 379244M
Concentration: 215.3? NG
q-value: 1??

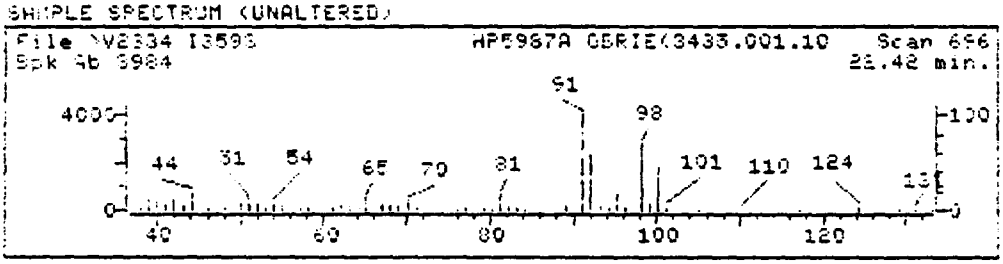
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



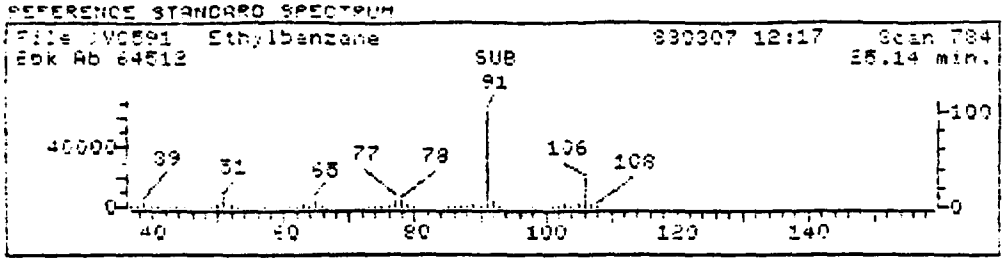
SAMPLE SPECTRUM (UNALTERED)



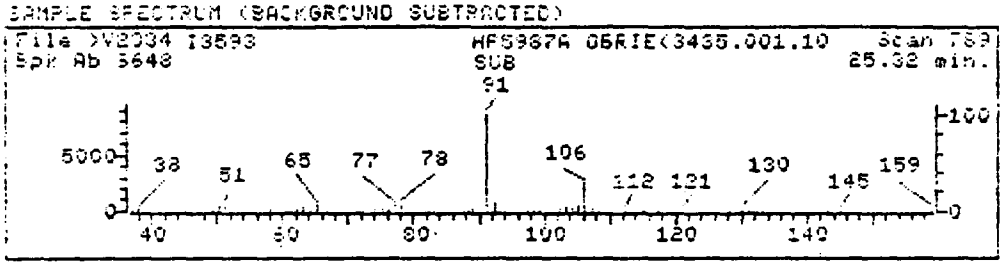
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 14:51 Quant ID File: ID:ML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:58

Compound No: 38
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 92.0
Area: 27526
Concentration: 25.16 NG
q-value: 95

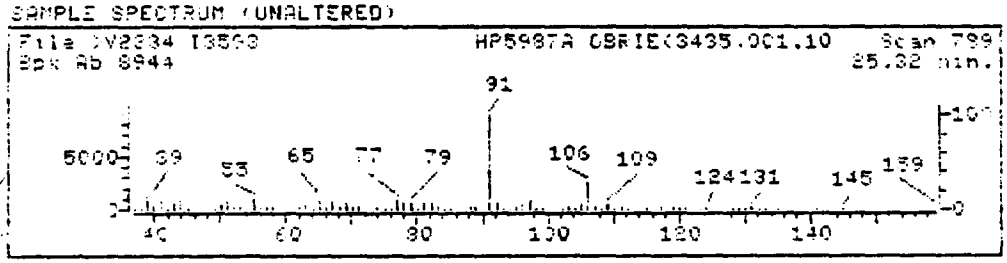
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



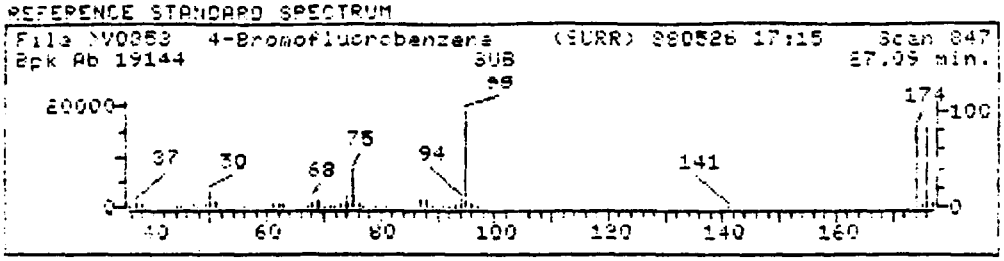
SAMPLE SPECTRUM (UNALTERED)



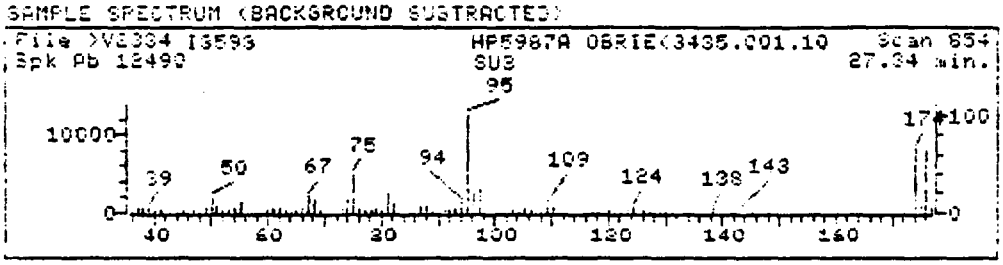
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A CBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDVML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:5?

Compound No: 40
Compound Name: Ethylbenzene
Scan Number: 789
Retention Time: 25.32 min.
Quant Ion: 106.0
Area: 33233M
Concentration: 51.76 NG
q-value: 97

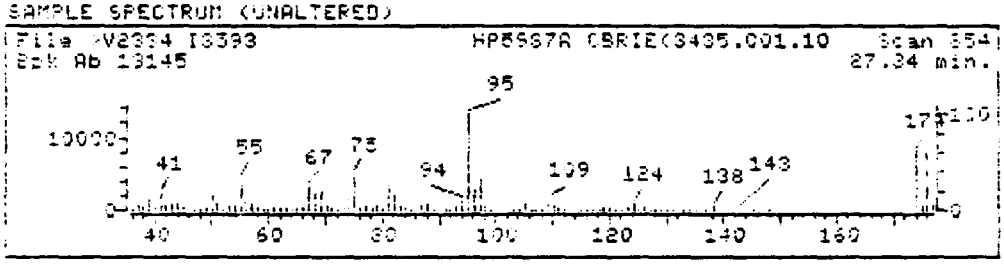
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



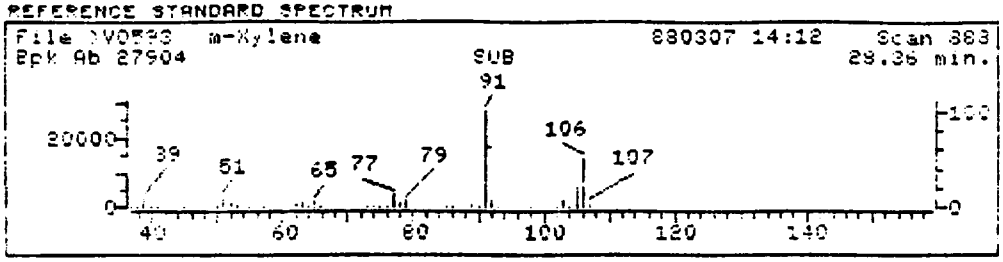
SAMPLE SPECTRUM (UNALTERED)



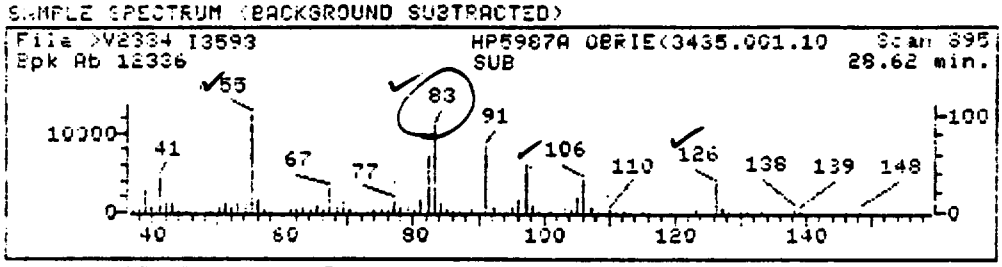
Data File: >V2334::D2 Quant Output File: >V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDXML::EN
Injected at: 890419 15:43 Last Calibration: 890419 10:53

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 210804M
Concentration: 246.13 NG
q-value: 77

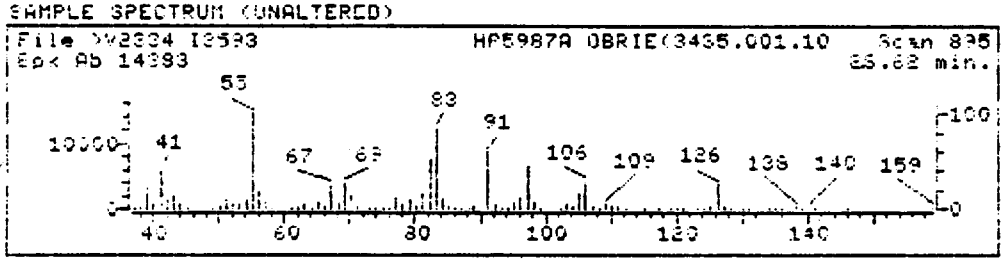
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

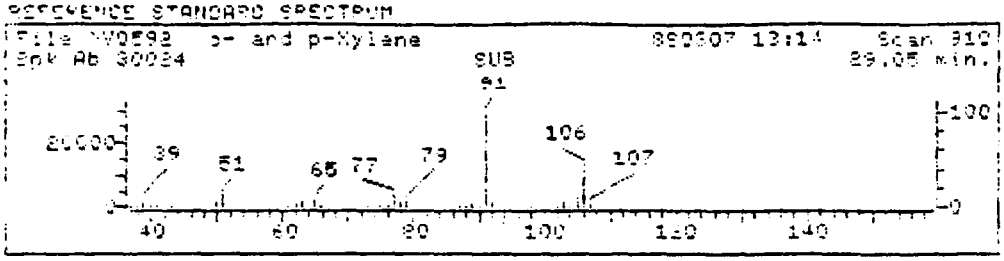


X hydrocarbon overlap
- compare with m-xylene standard sample I3590

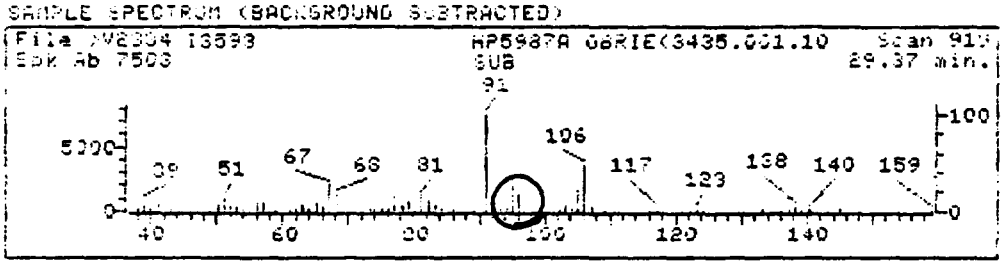
Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: IDVML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:58

Compound No: 45
Compound Name: m-Xylene
Scan Number: 895
Retension Time: 28.62 min.
Quant Ion: 106.0
Area: 77228M
Concentration: 82.37 NG
Q-value: 94

REFERENCE STANDARD SPECTRUM

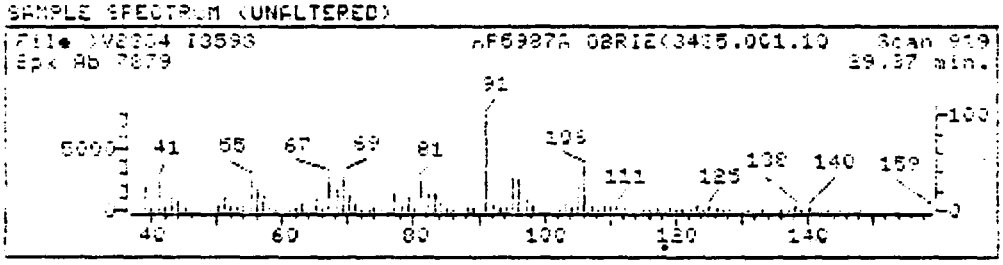


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



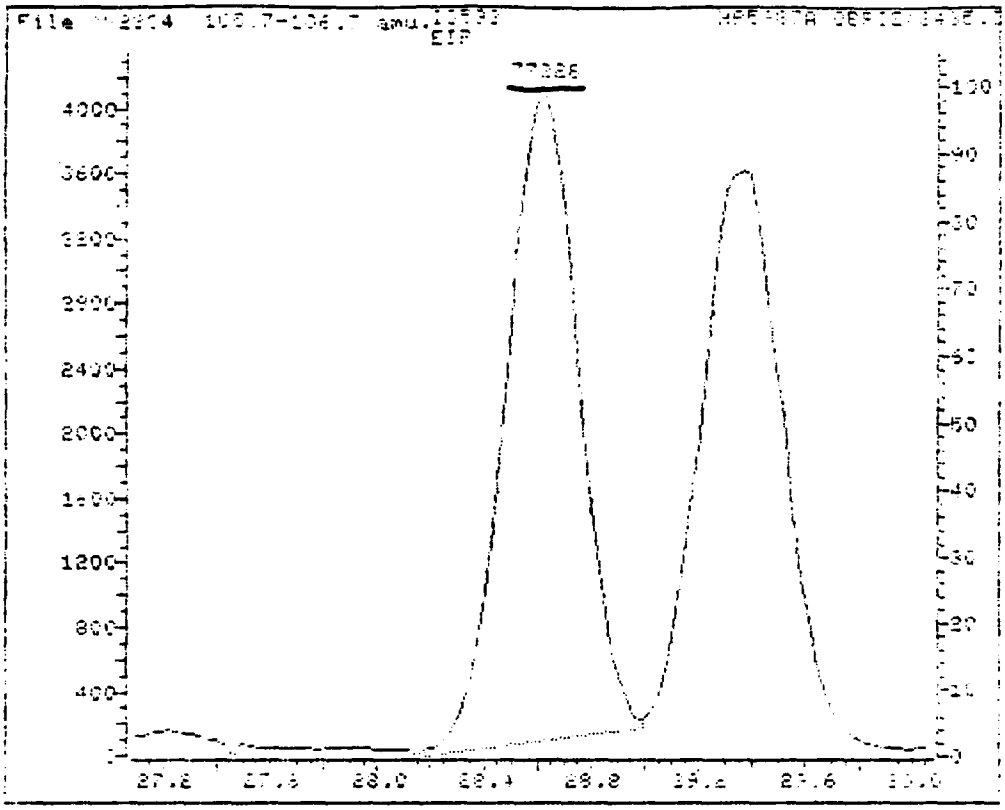
w/hydrocarbon overlap

SAMPLE SPECTRUM (UNFILTERED)



Data File: >V2334::D2 Quant Output File: ^V2334::D1
Name: I3593
Misc: HP5987A 08RIE(3435.001.100)F1
Quant Time: 890419 16:51 Quant ID File: IDUML::EX
Injected at: 890419 15:45 Last Calibration: 890419 10:53

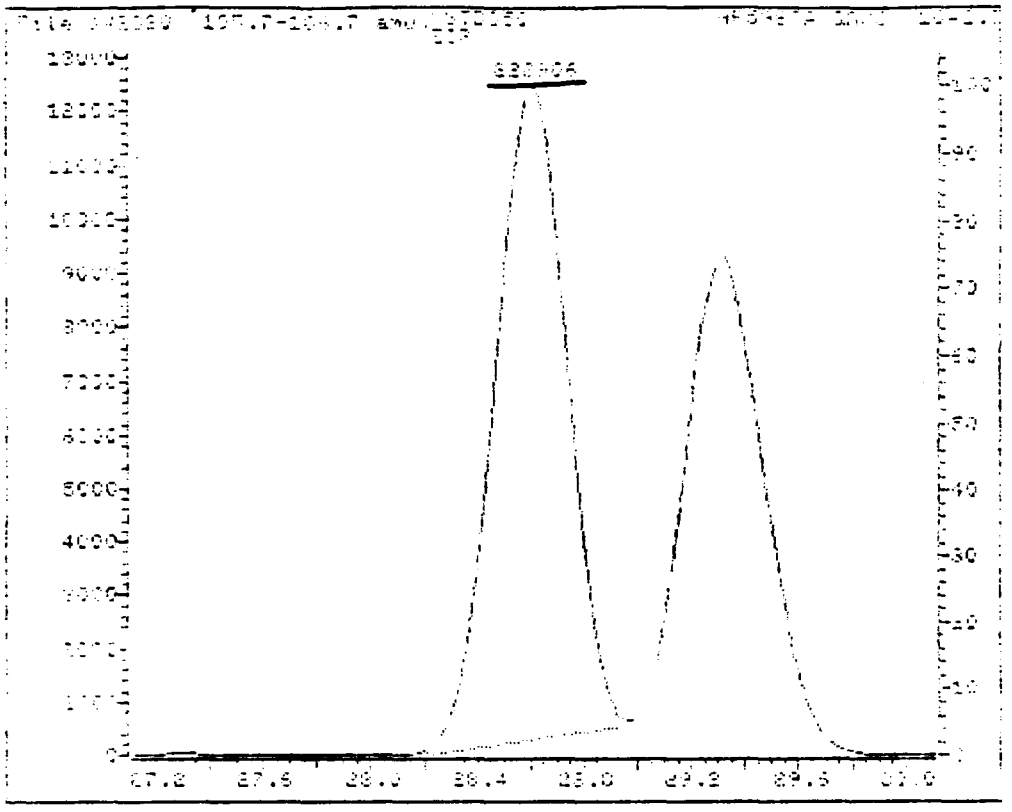
Compound No: 44
Compound Name: Xylene (total)
Scan Number: 919
Retention Time: 29.37 min.
Quant Ion: 106.0
Area: 73809
Concentration: 96.08 NG
q-value: 94



Data File: >V2334::D2 Quant Output File: ^V2334::01
Name: 13575
Misc: HP5987A 02RIE(5435.001.100)P1
Quant Time: 890419 16:51 Quant ID File: 10-ML::2
Injected at: 890419 15:45 Last Calibration: 890419 10:50

Compound No: 43
Compound Name: m-Xylene
Scan Number : 1595
Retention Time: 29.62 min.
Quant Ion: 106.0
Area: 772284
Concentration: 82.57 NG
q-value: 94

This report was produced by QAREA on: 890425 15:30



Data File: >V2320::D2 Quant Output File: [illegible]
Name: UST-005
Inst: HP5987A GA/GC(1042.397.5001P1
Quant Time: 890418 10:15 Quant ID File: ID[illegible]
Injected at: 890418 09:19 Last Calibration: 890418 [illegible]

Compound no: 45
Compound Name: m-Xylene
Peak Number: 895
Retention Time: 28.61 min.
Quant Ion: 106.0
Area: 22e706M
Concentration: 334.93 NG
Qualue: 9o

This report was produced by CAREA on: 890425 15:51

Data file header from : IV2334

Template: I3597 Operator: KAREN MS 4/19/89 15:44
Acq : HP5987A OBRIE(3435.001.100)P1
Inj. #: 1 MS model: 87 SW/HW rev.: 1A ALS # : 0
Method file: CLPVOA Tuning file: MT8713 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 280 Transfer line temp. : 280

Chromatographic temperatures :	45.	280.	0	0.	0
Chromatographic times, min. :	3.0	15.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	0.0	0.0

IV2334 I3597 HP5987A OBRIE(3435.001.100)P1
35.0 260.0 CLP ADC TIC
Aslope: .01 Area Reject: 53551. Max Peaks: 10 Bunching: 1
Bnslope: -.01 Results File IV2334 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	25.00	755	779	780	37579	938179	696316	17.20	7.350
2	26.16	805	816	824	21868	761855	411114	10.30	2.139
3	26.84	824	838	842	20718	1093645	452449	11.34	2.347
4	30.33	956	950	986	108549	6927844	3726254	93.44	19.391
5	31.92	986	1001	1016	26688	2695297	711707	17.84	3.703
6	33.42	1019	1049	1061	42162	4603933	1782707	44.68	9.275
7	34.44	1065	1082	1124	79184	8701735	3993166	100.09	20.773
8	36.34	1124	1143	1167	45703	4309136	1772235	44.42	9.218
9	38.43	1167	1210	1211	54040	4631718	2095594	52.53	10.901
10	38.99	1211	1228	1255	71760	7279436	3667864	91.92	19.080

Sum of corrected areas: 19296735.
Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	250.0	555509.	8.47	.83 - 15.17
2	250.0	893215.	18.66	13.57 - 21.05
3	250.0	1105996.	23.48	21.05 - 39.31

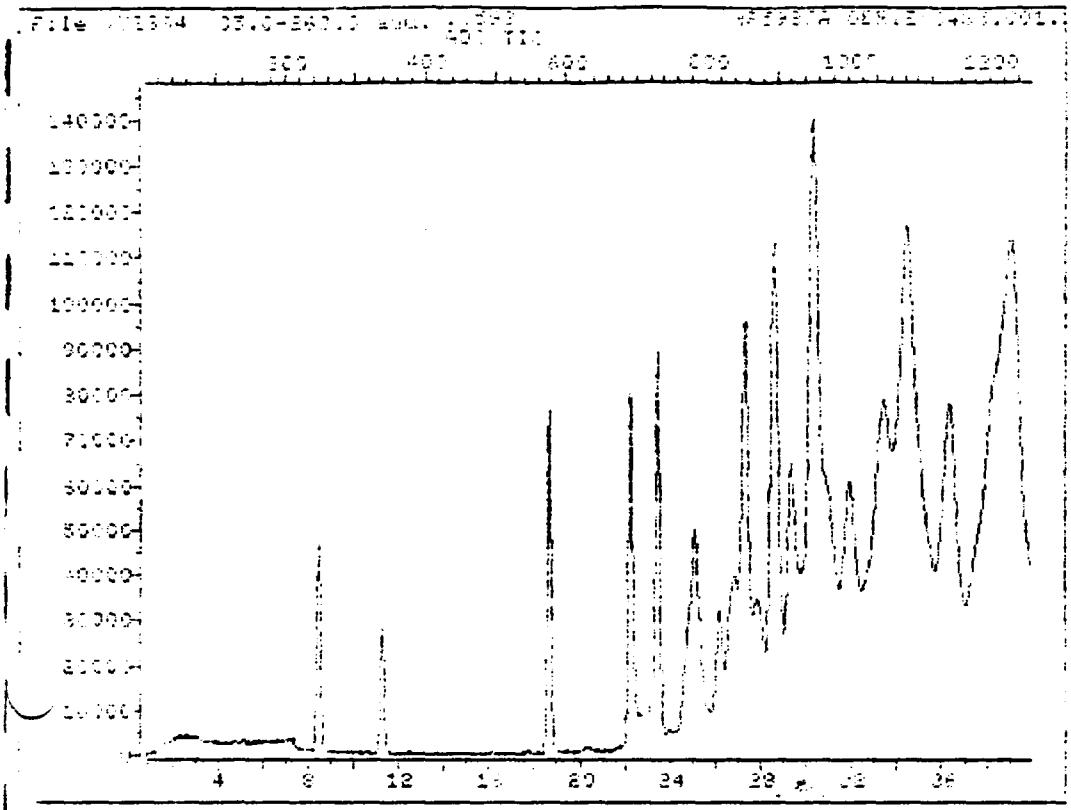
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

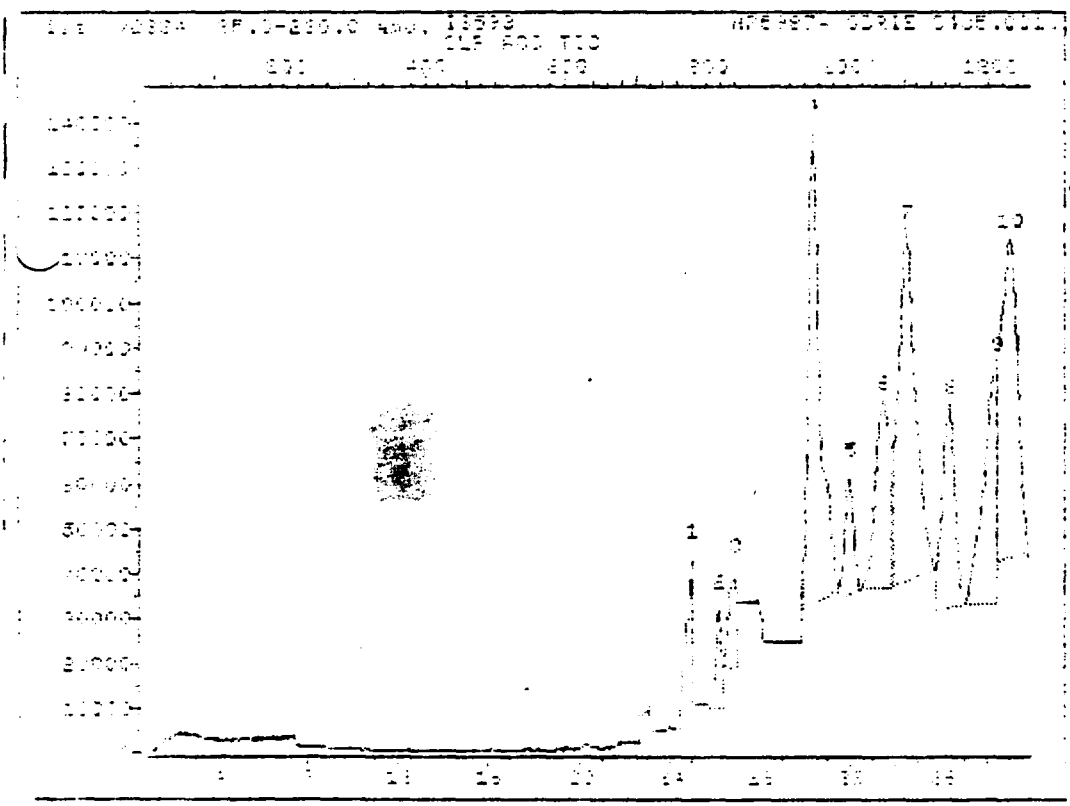
Correction Factor = 1.00 = (AM / AU) / (DF * FS)

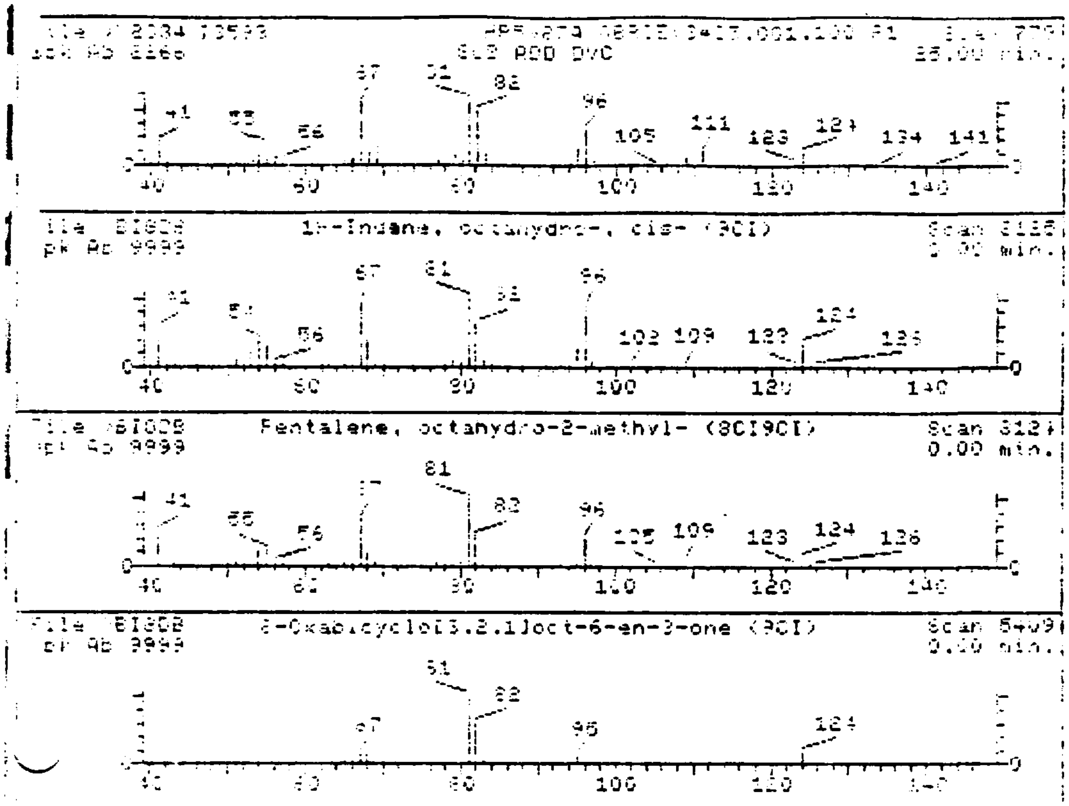
$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unk} * \text{Correction Factor}$$

4:12 PM THU , 27 APR , 1989

$$\text{Factor} = \frac{10000}{100} \times \frac{1}{3.9661} \times \frac{1}{0.541} = 46.606$$





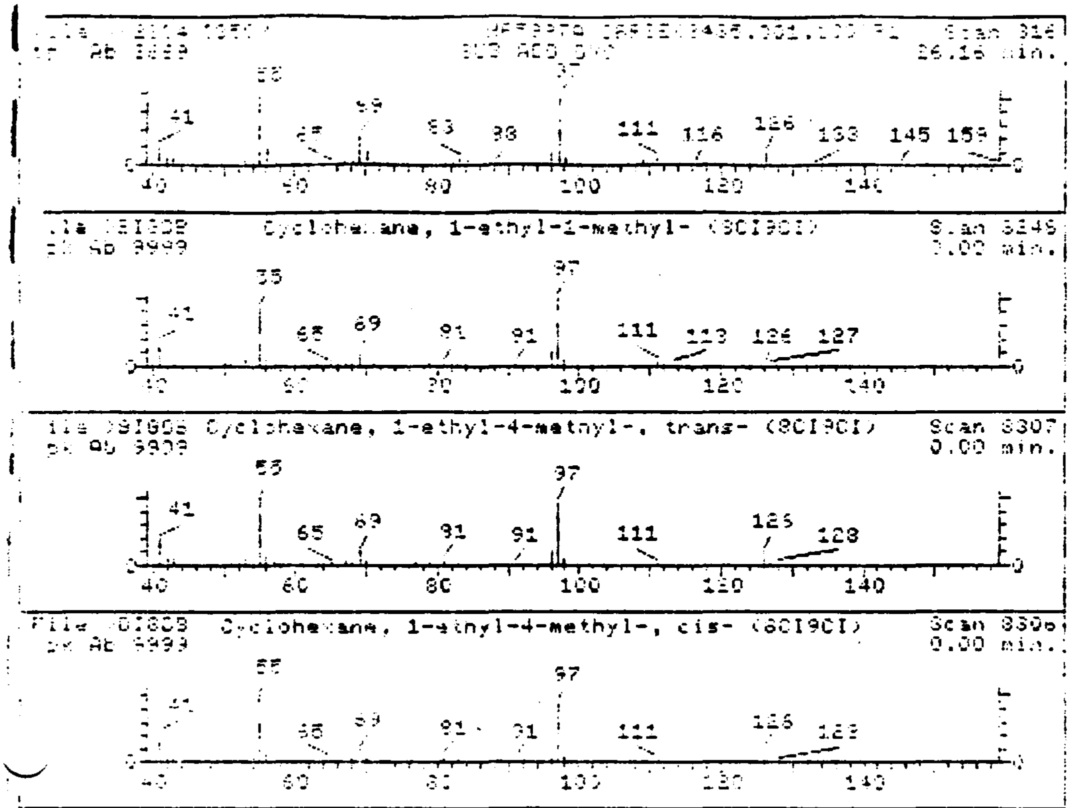


Unknown #.1
Area = 686316.0 Tentative Concentration is 160.00

1. 1H-Indene, octahydro-, cis- (9CI) 124 C9H16
2. Pentalene, octahydro-2-methyl- (8CI9CI) 124 C9H16
3. 8-Oxabicyclo[3.2.1]oct-6-en-3-one (9CI) 124 C7H8O2
4. Pentalene, octahydro-1-methyl- (8CI9CI) 124 C9H16
5. 1,5-Heptadiene, (Z)- (8CI9CI) 96 C7H12
6. 3-Hexyne (8CI9CI) 82 C6H10
7. Cyclopentane, 1-methyl-2-methylene- (9CI) 96 C7H12

Sample file: >U2334 Spectrum #: 779
Search speed: 3 Tilting option: N No. of ion ranges searched: [illegible]

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IF
1.	45*	4551515	8125	"BIGDB	47	73	0	0	50	46	13	[illegible]
2.	40*	3868642	8124	"BIGDB	50	61	2	0	93	51	16	25
3.	30*	40458773	5409	"BIGDB	29	31	0	0	100	46	1[illegible]	[illegible]
4.	30*	72273771	2905	"BIGDB	39	56	1	0	98	40	10	[illegible]
5.	25*	7736847	743	"BIGDB	29	50	[illegible]	[illegible]	550	47	7	14
6.	25*	928494	5720	"BIGDB	23	98	3	0	[illegible]	47	7	10
7.	24*	41178413	5211	"BIGDB	40	57	1	0	[illegible]	55	7	[illegible]

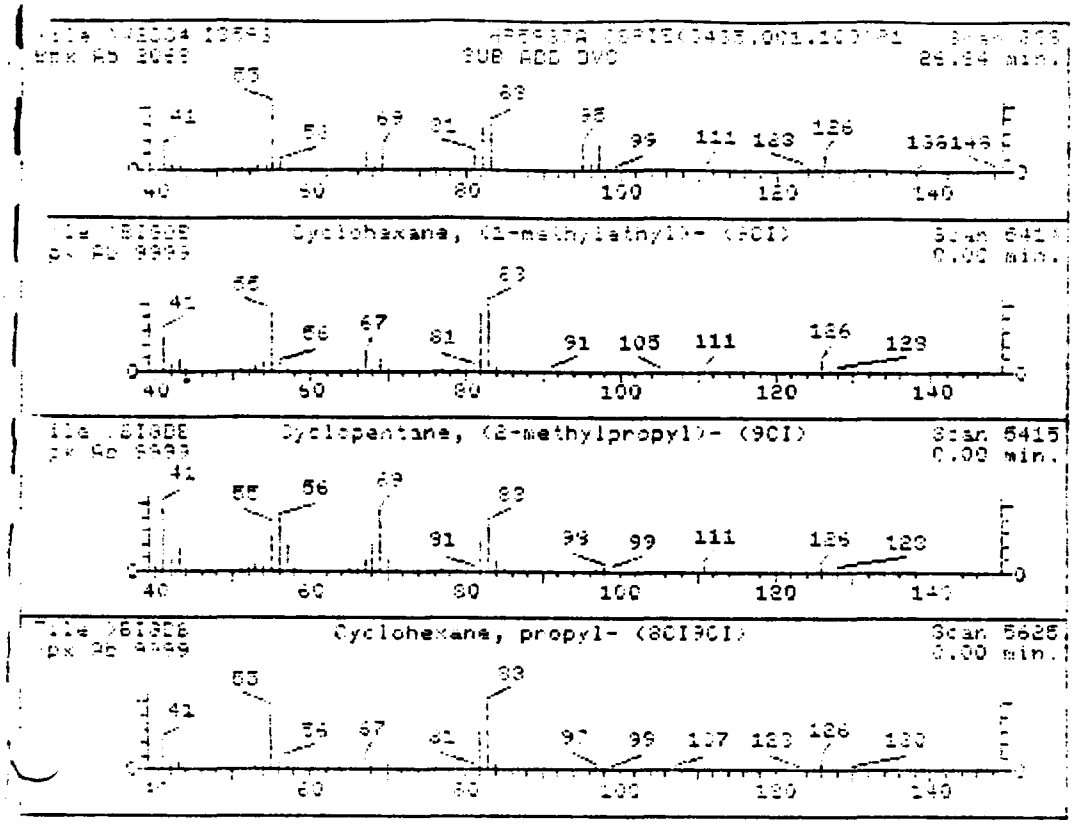


Unknown #,2
Area = 411114.0 Tentative Concentration is 93.00

1. Cyclohexane, 1-ethyl-1-methyl- (8CI9CI) 126 C9H18
2. Cyclohexane, 1-ethyl-4-methyl-, trans- (8CI9CI) 126 C9H18
3. Cyclohexane, 1-ethyl-4-methyl-, cis- (8CI9CI) 126 C9H18
4. 3-Heptanone, 5-methylene- (8CI) 126 C8H14O
5. 1H-Pyrazole, 5-ethyl-4,5-dihydro-3,5-dimethyl- (9CI) 126 C7H14N2
6. Cyclohexane, 1-ethyl-2-methyl-, cis- (8CI9CI) 126 C9H18
7. 2-Hexene, 3,4,4-trimethyl- (9CI) 126 C9H18

Sample file: >V2334 Spectrum #: 816
Search speed: 3 Tilting option: N No. of ion ranges searched: [illegible]

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	71*	4926903	8249	"BIGDB	57	34	0	0	94	[illegible]	[illegible]	[illegible]
2.	70*	6236880	8307	"BIGDB	60	36	1	0	84	[illegible]	[illegible]	[illegible]
3.	59*	4926787	8306	"BIGDB	51	45	1	0	73	[illegible]	[illegible]	[illegible]
4.	52*	20690704	8197	"BIGDB	26	49	3	0	95	[illegible]	[illegible]	[illegible]
5.	52*	21731226	8321	"BIGDB	29	68	3	0	100	[illegible]	[illegible]	[illegible]
6.	46*	4923777	8305	"BIGDB	43	47	2	0	97	[illegible]	[illegible]	[illegible]
7.	42*	55941199	8320	"BIGDB	40	53	2	0	100	[illegible]	[illegible]	[illegible]

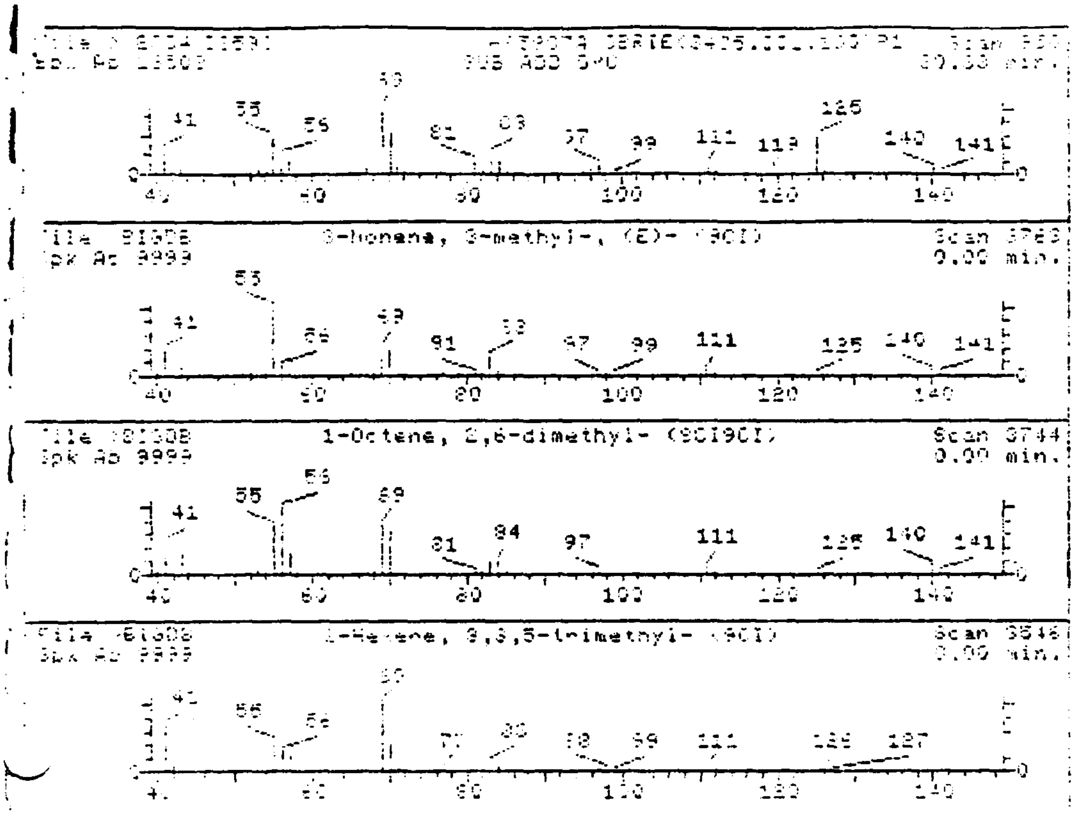


Unknown #,5
Area = 472449.0 Tentative Concentration is 100.0

1.	Cyclohexane, (1-methylethyl)- (9CI)	126 C9H18
2.	Cyclopentane, (2-methylpropyl)- (9CI)	126 C9H18
3.	Cyclohexane, propyl- (8CI9CI)	126 C9H18
4.	Cyclohexanone, 2-ethyl- (8CI9CI)	126 C8H14O
5.	2(5H)-Furanone, 3,5,5-trimethyl- (9CI)	126 C7H10O2
6.	Pyridine, 2,3,4,5-tetrahydro- (8CI9CI)	83 C5H9N
7.	2-Pyrazoline, 1-methyl-4-propyl- (8CI)	126 C7H14N2

Sample file: >02334 Spectrum #: 858
Search speed: 3 Tilting option: N No. of ion ranges searched: 57

	Prob.	CASE #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_I
1.	47*	6?6297	5414	"BIGDB	41	62	0	0	53	41	16	43
2.	27*	3733527	5415	"BIGDB	39	60	3	0	103	39	11	17
3.	25*	1678928	5625	"BIGDB	35	62	1	0	58	40	7	11
4.	25*	4423943	3637	"BIGDB	22	96	3	0	101	51	7	12
5.	20*	8059850	10677	"BIGDB	22	53	2	1	174	54	5	10

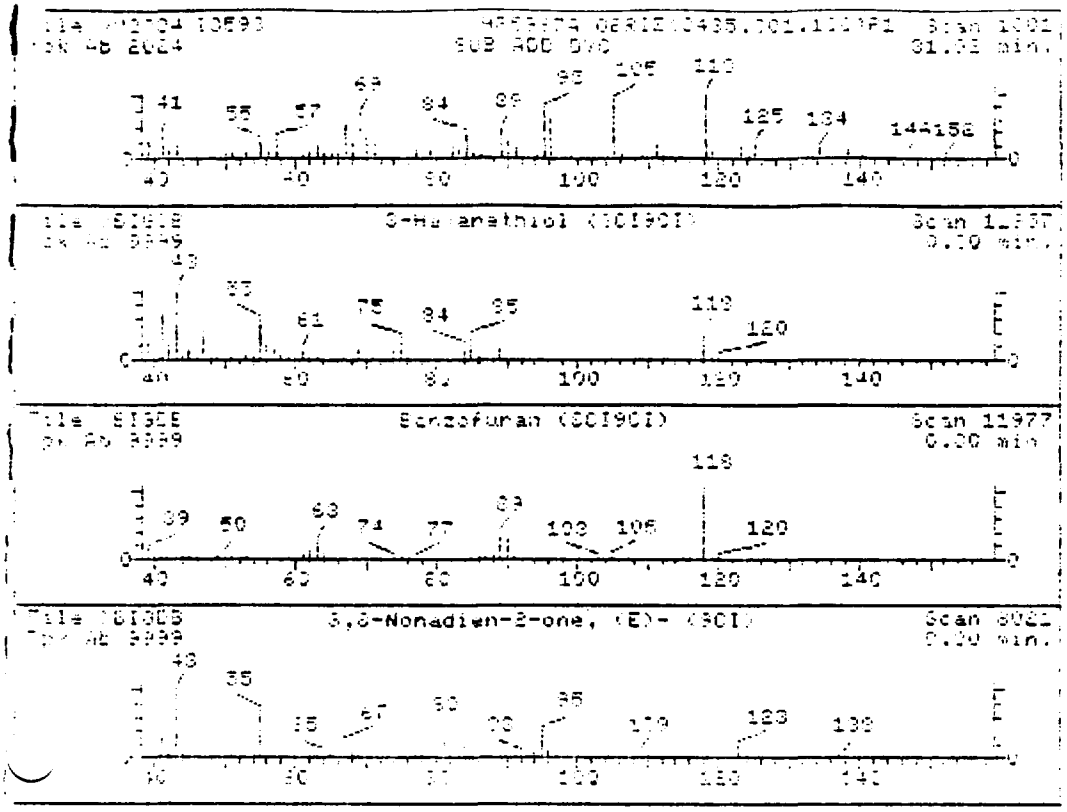


Unknown #.4
Area = 372323-. Tentative Concentration is 340.00

1.	3-Nonene, 3-methyl-, (E)- (9CI)	140	C10H20
2.	1-Octene, 2,6-dimethyl- (8CI9CI)	140	C10H20
3.	1-Hexene, 3,3,5-trimethyl- (9CI)	126	C9H18
4.	Cyclopropane, 1,2-dimethyl-3-pentyl- (9CI)	140	C10H20
5.	Cyclopentane, (2-methylbutyl)- (9CI)	140	C10H20
6.	1-Decene (8CI9CI)	140	C10H20
7.	Cyclohexane, 1-ethyl-2,3-dimethyl- (8CI)	140	C10H20

Sample file: >02354 Spectrum #: 350
Search speed: 5 Tilting option: N No. of ion ranges searched: [illegible]

	Prob.	CAS #	CON #	RCOT	K	DK	#FLG	TILT	%	CON	C_I	R_I
1.	33*	69405421	3763	"BIGDB	46	43	2	0	125	44	17	[illegible]
2.	30*	6874299	3744	"BIGDB	51	52	2	0	71	48	10	[illegible]
3.	30*	13427435	3548	"BIGDB	38	55	1	0	86	42	12	[illegible]
4.	30*	62238355	3756	"BIGDB	37	64	3	0	173	32	12	[illegible]
5.	27*	55566364	10645	"BIGDB	36	74	3	0	92	39	10	[illegible]
6.	27*	872059	3738	"BIGDB	39	80	3	0	52	39	10	[illegible]
7.	26*	7059051	10693	"BIGDB	32	47	1	0	91	42	[illegible]	[illegible]

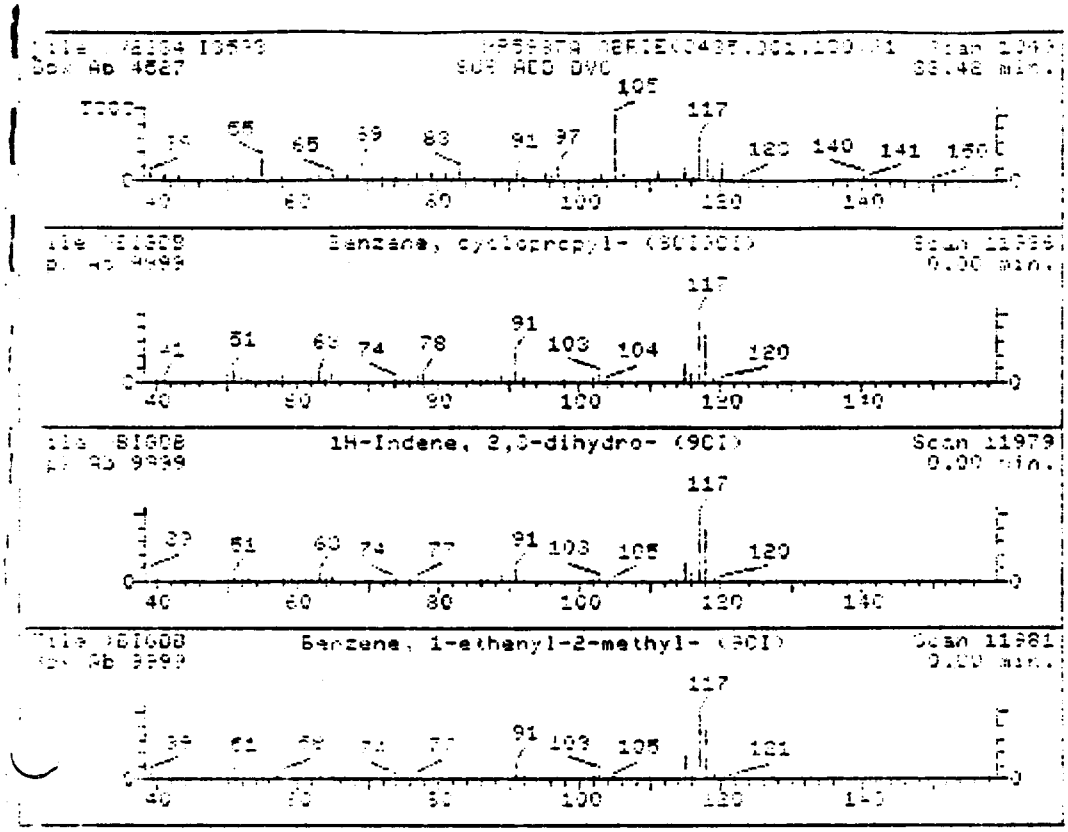


Unknown #,3
Prob = 711707.0 Tentative Concentration is 160.0.

1. 3-Hexanethiol (3CI9CI)
2. Benzofuran (8CI9CI)
3. 3,8-Nonadien-2-one, (E)- (9CI)

Sample file: >U1334 Spectrum #: 1001
Search speed: 3 Tilting option: N No. of ion ranges searched: 57

	Prob.	CAS #	CON #	ROOT	K	OK	#FLG	TILT	%	CON	C_I	+_I
1	16*	1633905	11957	*BIGOB	24	47	2	0	100	97	3	

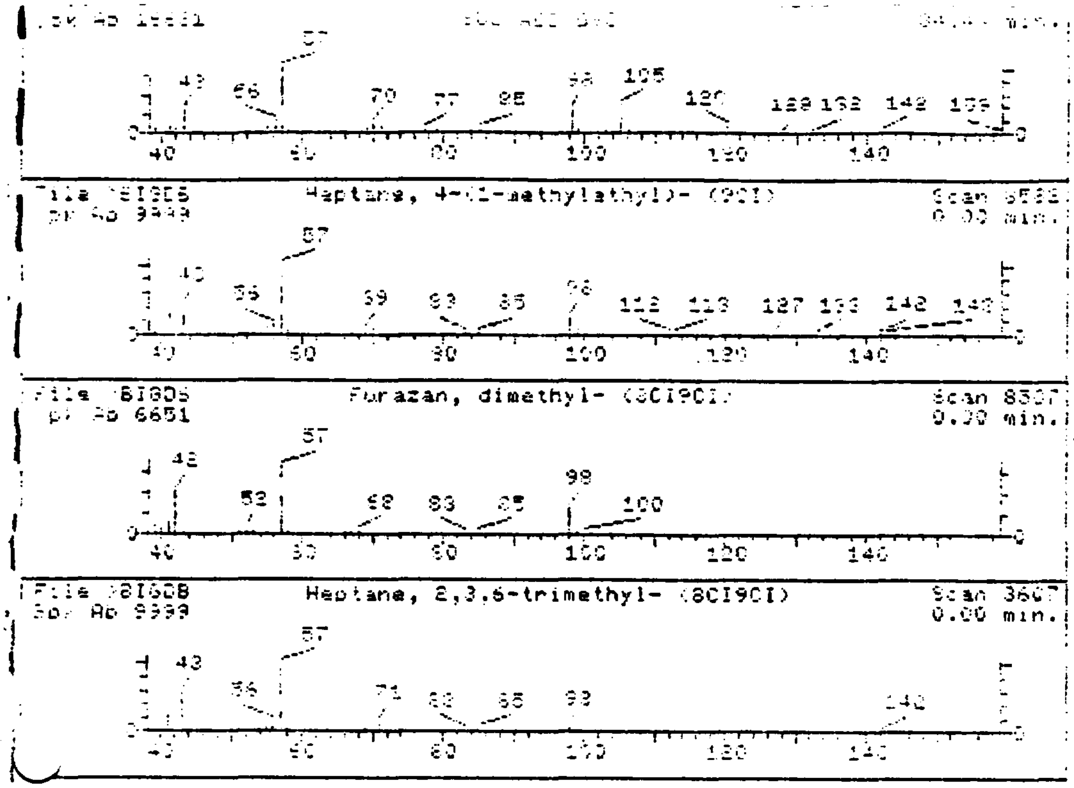


Unknown #.6
Area = 1732707 Tentative Concentration is 400.00

1. Benzene, cyclopropyl- (8CI,9CI) 118 C9H10
2. 1H-Indene, 2,3-dihydro- (9CI) 118 C9H10
3. Benzene, 1-ethenyl-2-methyl- (9CI) 118 C9H10
4. Benzene, 1,1'-(1-ethenyl-1,3-propanediyl)bis- (9CI) 222 C17H18
5. Benzene, 2-propenyl- (9CI) 118 C9H10
6. Benzene, 1-ethenyl-3-methyl- (9CI) 118 C9H10
7. Benzene, ethenylmethyl- (9CI) 118 C9H10

Sample file: >01334 Spectrum #: 1047
Search speed: 3 Tilting option: N No. of ion ranges searched:

	Prob.	CAS #	CON #	ROOT	K	D%	#FLG	TILT	%	CON	C_I	P_I
1	40*	873494	11986	*BIGDB	67	32	2	0	49	50	17	
2	32*	496117	11979	*BIGDB	53	34	1	0	44	54	9	
3	20*	611154	11981	*BIGDB	26	52	0	0	42	51	7	
4	10	21141977	12001	*BIGDB	67	46	2	0	54	53	3	

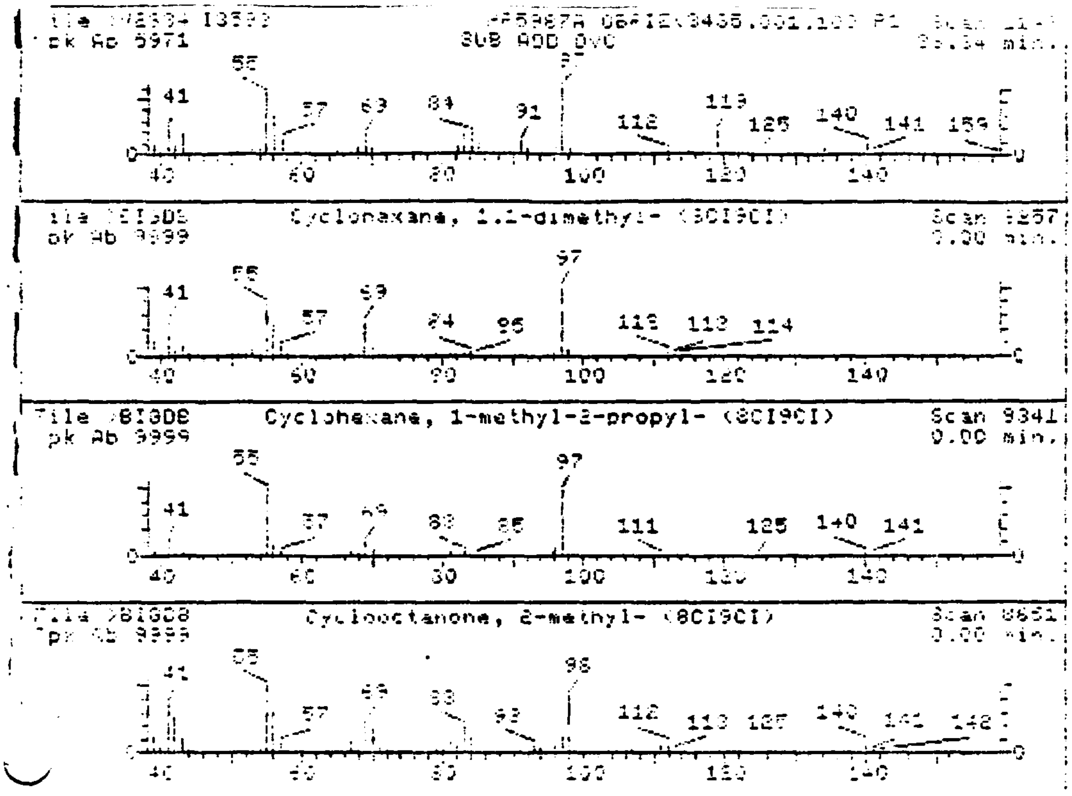


Unknown #.2
Area = 3?9016s. Tentative Concentration is [illegible]

1. Heptane, 4-(1-methylethyl)- (9CI) 142 C10H22
2. Furazan, dimethyl- (8CI9CI) 98 C4H6N2O
3. Heptane, 2,3,6-trimethyl- (8CI9CI) 142 C10H22
4. Octane, 3-methyl- (8CI9CI) 128 C9H20
5. Heptane, 2,3,5-trimethyl- (8CI9CI) 142 C10H22
6. Octane, 3,6-dimethyl- (8CI9CI) 142 C10H22
7. Cyclopentanol, 2-chloro-, trans- (8CI9CI) 120 C5H9ClO

Sample file: >02334 Spectrum #: 1082
Search speed: 3 Tilting option: N No. of ion ranges searched: [illegible]

	Prob.	CAS #	CON #	RCJT	K	DK	#FLG	TILT	%	CON	C_I	R_I
1.	31*	52896874	8582	*BIGDB	57	46	1	[illegible]	[illegible]	43	[illegible]	[illegible]
2.	27*	4975217	8507	*BIGDB	22	69	2	0	[illegible]	36	10	17
3.	25	4032935	3607	*BIGDB	52	30	2	0	[illegible]	49	[illegible]	[illegible]
4.	25	2216333	8731	*BIGDB	43	41	1	0	[illegible]	[illegible]	7	[illegible]
5.	24	20278357	1203	*BIGDB	46	30	0	0	79	[illegible]	7	[illegible]
6.	24*	15869940	11045	*BIGDB	45	44	1	0	[illegible]	[illegible]	7	[illegible]
7.	20*	20377804	1215	*BIGDB	26	52	3	0	[illegible]	34	[illegible]	[illegible]

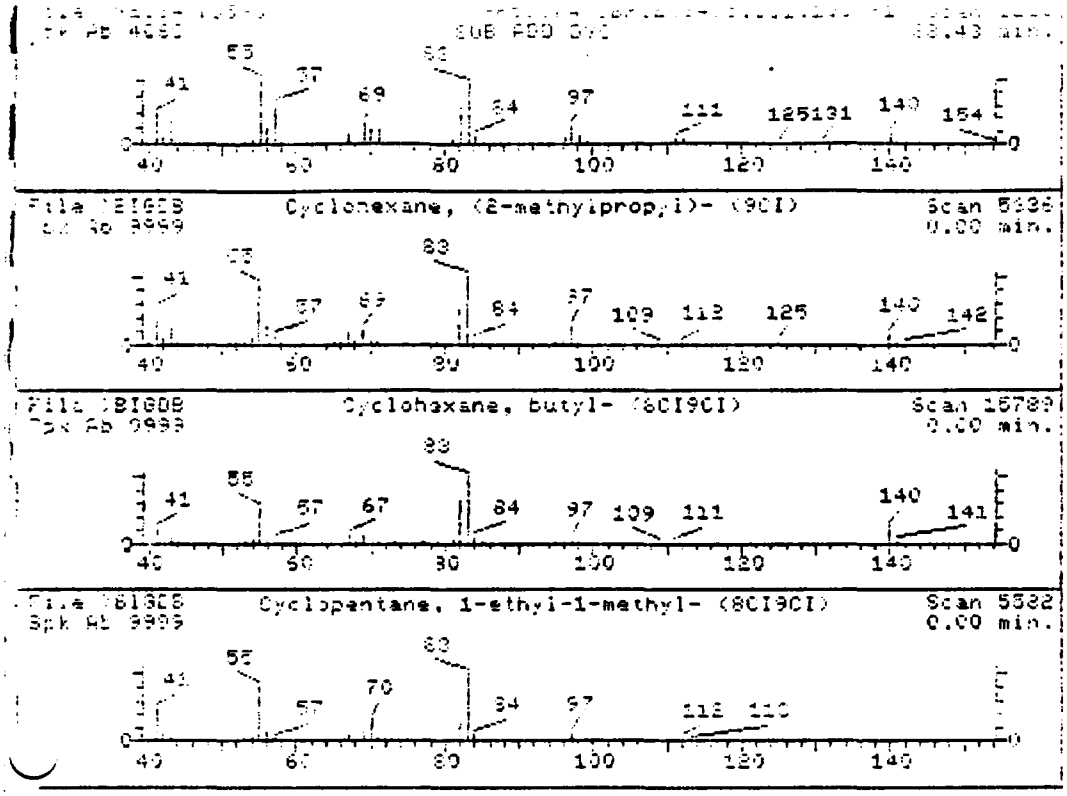


Unknown #,3
Area = 1772235. Tentative Concentration is 400.00

1. Cyclohexane, 1,1-dimethyl- (8CI9CI) 112 [illegible]
2. Cyclohexane, 1-methyl-2-propyl- (8CI9CI) 140 [illegible]
3. Cyclooctanone, 2-methyl- (8CI9CI) 140 [illegible]
4. 1H-1,2,4-Triazole, 3-ethyl- (9CI) 97 [illegible]
5. Cycloheptane, methyl- (8CI9CI) 112 [illegible]
6. 3-Hexene, 3-ethyl-2,5-dimethyl- (9CI) 140 [illegible]
7. Cyclohexane, 1-ethyl-2-methyl-, trans- (8CI9CI) 126 [illegible]

Sample file: >V2334 Spectrum #: 1143
Search speed: 3 Tilting option: N No. of ion ranges searched [illegible]

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	[illegible]	[illegible]
1.	33*	590669	8257	"BIGDB	43	55	1	0	91	42	12	[illegible]
2.	32*	4291796	8341	"BIGDB	40	49	1	0	35	45	[illegible]	[illegible]
3.	27*	10363276	8651	"BIGDB	31	90	3	0	91	[illegible]	[illegible]	[illegible]
4.	26*	7411167	8083	"BIGDB	26	59	2	0	159	42	[illegible]	[illegible]
5.	26	4126737	8219	"BIGDB	61	45	[illegible]	0	34	44	3	[illegible]
6.	25*	62338083	8356	"BIGDB	41	56	3	0	91	[illegible]	[illegible]	[illegible]
7	25	[illegible]	8211	"BIGDB	50	73	1	[illegible]	[illegible]	47	[illegible]	[illegible]

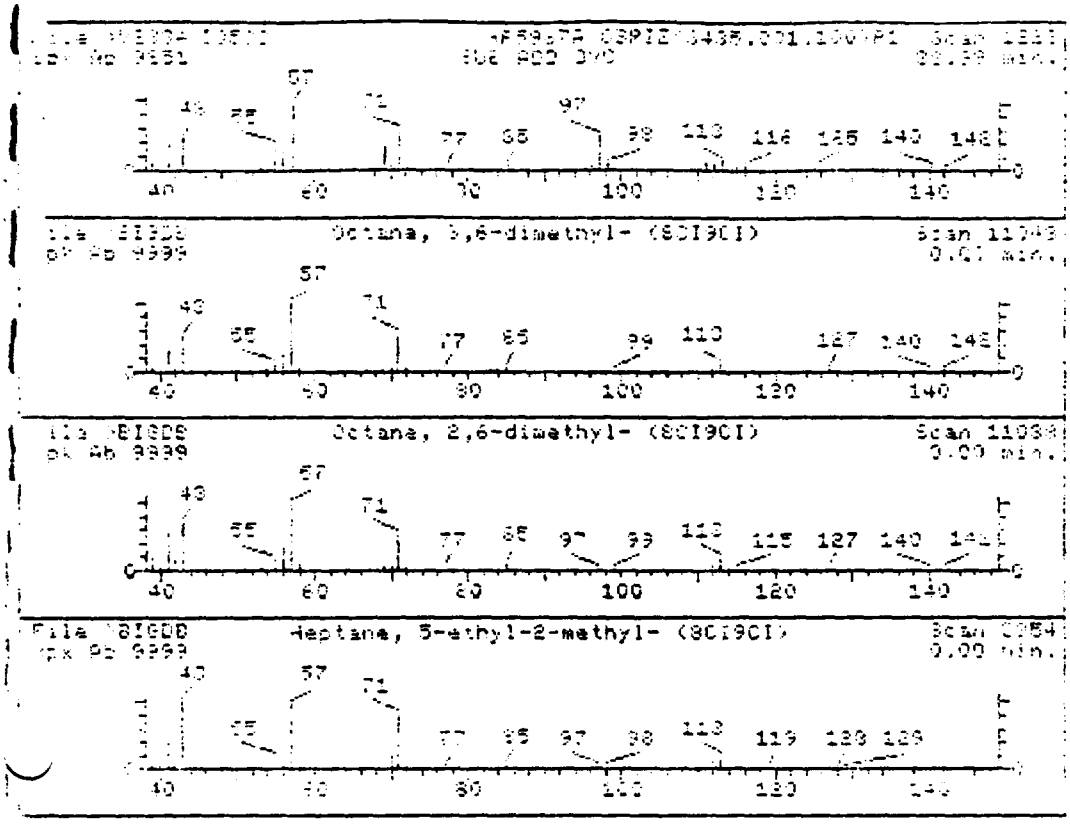


Unknown #,"
Area = 1093794. Tentative Concentration is 470.00

1.	Cyclohexene, (2-methylpropyl)- (9CI)	140 C10H18
2.	Cyclohexane, butyl- (8CI9CI)	140 C10H20
3.	Cyclopentane, 1-ethyl-1-methyl- (8CI9CI)	112 C8H16
4.	2,4(1H,3H)-Pyrimidinedione, 1,3-dimethyl- (9CI)	140 C6H8N2O2
5.	Cyclohexane, propyl- (8CI9CI)	126 C9H18
6.	Cyclohexanone, 2,3,5-trimethyl- (8CI9CI)	140 C9H16O
7.	Cyclopentane, 1-ethyl-3-methyl-, cis- (8CI9CI)	112 C8H16

Sample file: TVCF34 Spectrum #: 1210
Search speed: 5 Tilting option: N No. of ion ranges searched:

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	X	CON	C_I	F_I
1.	94*	1678984	5e35	"BIGDB	83	20	0	0	65	17	21	17
2.	88*	1e78939	15739	"BIGDB	33	60	2	0	66	27	14	17
3.	80*	16747805	5582	"BIGDB	26	70	0	0	67	41	1	17
4.	29	874146	15787	"BIGDB	47	48	2	0	134	33	12	12
5.	29	1678928	5e25	"BIGDB	48	49	2	0	99	34	11	12
6.	27*	877949	5e35	"BIGDB	23	74	3	0	95	39	17	17
7.	27*	2e13663	5e1L	"BIGDB	20	80	3	0	109	30	11	17



Unknown #.10
Area = 3e07864. Tentative Concentration is 850.00

1.	Octane, 3,6-dimethyl- (8CI9CI)	142 C10H22
2.	Octane, 2,6-dimethyl- (8CI9CI)	142 C10H22
3.	Heptane, 5-ethyl-2-methyl- (8CI9CI)	142 C10H22
4.	3-Hexene-2,5-dione (8CI9CI)	112 C6H8O2
5.	Undecane, 3,8-dimethyl- (8CI9CI)	184 C13H28
6.	Heptane, 3-ethyl-5-methyl- (9CI)	142 C10H22
7.	Undecane, 3-methyl- (8CI9CI)	170 C12H26

Sample file: >02334 Spectrum #: 1228
Search speed: 3 Tilting option: N No. of ion ranges searched: 2

	Prob.	CAS #	CON #	ROOT	K	OK	#FLG	TILT	%	CON	C_I	R_I
1.	45*	15869940	11043	"EIGOB	68	21	0	0	96	53	13	33
2.	34*	2051301	11038	"EIGOB	62	27	2	0	87	54	10	35
3.	20	17475733	8954	"EIGOB	58	48	1	0	49	54	5	6
4.	20*	4435755	8147	"EIGOB	22	60	5	0	192	82	5	13

Forms VI, VII, VIII

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: HP 5987A

Contractor: ORG Laboratories,Inc Calibration Date: 04/18/89

Contract No: _____

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % RSD for CCC is 30.0%

Laboratory ID:	>U2315	>U2314	>U2316	>U2317	>U2318					
Compound	RF 100.00	RF 250.00	RF 500.00	RF 750.00	RF 1000.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Chloromethane	.72814	.56639	.74475	.70579	.68303	.138	.68482	10.156		**
Bromomethane	2.01382	1.59868	1.83815	1.83732	1.77946	.213	1.81189	8.375		
Vinyl Chloride	1.82822	1.68787	1.69872	1.73986	1.71848	.288	1.71685	4.666	*	
Chloroethane	1.38986	1.12891	1.28772	1.18621	1.21304	.386	1.20915	5.411		
Methylene Chloride	2.01872	1.76248	1.81727	1.82484	1.79482	.613	1.84345	5.475		
Acetone	.67520	.49797	.51837	.51519	.50936	.728	.54322	13.657		
Carbon Disulfide	4.79811	4.33784	4.47731	4.46852	4.49774	.776	4.51414	3.781		
Trichlorofluoromethane-Freon11	2.16977	1.94882	1.84855	1.88076	1.91656	.848	1.94983	6.548		
1,1-Dichloroethene	1.45148	1.49492	1.56588	1.54481	1.54625	.935	1.56864	3.659	*	
1,1-Dichloroethane	2.97841	2.59954	2.84252	2.86231	2.80748	1.093	2.81645	4.817		**
1,2-Dichloroethene (total)	1.77311	1.61398	1.71538	1.68826	1.71941	1.179	1.70169	3.416		
Chloroform	3.23618	2.81754	3.00462	2.88181	2.89491	1.256	2.96741	5.547	*	
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2.49681	2.45835	2.74824	2.62164	2.65183	1.284	2.59977	5.133		(Conc=99.8,249.5,499.8,74
1,2-Dichloroethane-d4	1.69627	1.59301	1.68746	1.58644	1.58389	1.329	1.60541	3.387		
1,2-Dichloroethane	1.99958	1.88992	1.81384	1.84121	1.84262	1.341	1.85945	4.074		
2-Chloroethylvinylether	.20192	.18987	.20628	.21090	.21775	2.060	.20518	5.238		
2-Butanone	.05883	.04417	.04428	.04778	.04490	.618	.04798	15.019		
1,1,1-Trichloroethane	.52082	.48189	.46655	.47635	.45624	.673	.48805	5.862		
Carbon Tetrachloride	.39772	.36875	.36236	.37834	.36238	.693	.37389	3.920		
Vinyl Acetate	.49465	.42983	.44830	.47141	.44619	.708	.46609	4.986		
Bromodichloromethane	.63324	.57547	.56665	.58528	.57169	.728	.58646	4.689		
1,2-Dichloropropane	.45828	.39868	.40196	.41566	.40164	.796	.41361	5.196	*	
cis-1,3-Dichloropropene	.72317	.66182	.67175	.69448	.67124	.812	.68432	3.641		(Conc=128.8,388.8,688.8,9
Trichloroethene	.44197	.39754	.40939	.42265	.39969	.848	.41425	4.441		
Benzene	1.28681	1.07741	1.11516	1.13971	1.06341	.864	1.12050	5.881		
Dibromochloromethane	.47998	.44923	.44635	.45784	.44783	.877	.45447	2.829		
trans-1,3-Dichloropropene	.49127	.45713	.44596	.48183	.47958	.888	.47359	2.771		(Conc=88.8,288.8,488.8,68
1,1,2-Trichloroethane	.37782	.36814	.36791	.39102	.36429	.891	.37804	5.512		
Bromoform	.36317	.30494	.31272	.32993	.32183	1.018	.32247	4.632		**
4-Methyl-2-pentanone	.36813	.29332	.32616	.33720	.34726	.826	.33441	8.279		

$\overline{RF}$ - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: HP 5987A

Contractor: OBG Laboratories,Inc Calibration Date: 04/18/89

Contract No: _____

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % RSD for CCC is 30.0%

Laboratory ID: >U2315 >U2314 >U2316 >U2317 >U2318

Compound	RF 100.00	RF 250.00	RF 500.00	RF 750.00	RF 1000.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
2-Hexanone	.28937	.23481	.25521	.28043	.28376	.891	.26856	8.647			
Tetrachloroethene	.37929	.36235	.37628	.35422	.36149	.989	.36671	2.894			
1,1,2,2-Tetrachloroethane	.72489	.59809	.65663	.66973	.69207	.987	.66828	7.833		**	
Toluene-d8	1.44191	1.48865	1.48072	1.37915	1.39869	.948	1.48944	2.209			
Toluene	.93142	.85894	.91215	.85452	.85079	.956	.88157	4.249	*		
Chlorobenzene	1.11977	1.05402	1.08561	1.05158	1.05841	1.000	1.07217	2.887		**	
Ethylbenzene	.54978	.49683	.52348	.51010	.50639	1.000	.51738	3.968	*		
Bromofluorobenzene	.72537	.67741	.69614	.66882	.66896	1.166	.68694	3.378			
Styrene	1.25481	1.10854	1.14824	1.14138	1.16252	1.211	1.16308	4.724			
m-Xylene	.81143	.77103	.78077	.73399	.75525	1.220	.75249	4.675			(Conc=100.4,251.0,502.0,7
Xylene (total)	.65194	.59523	.61010	.58369	.57488	1.251	.61715	5.489			

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890417 13:56
Output File: ^V2315::D1 Injected at: 890417 12:53
Data File: >V2315::D2 Dilution Factor: 1.00000
Name: VSTD020
Misc: HP5987A QA/QC(1042.097.300)P1

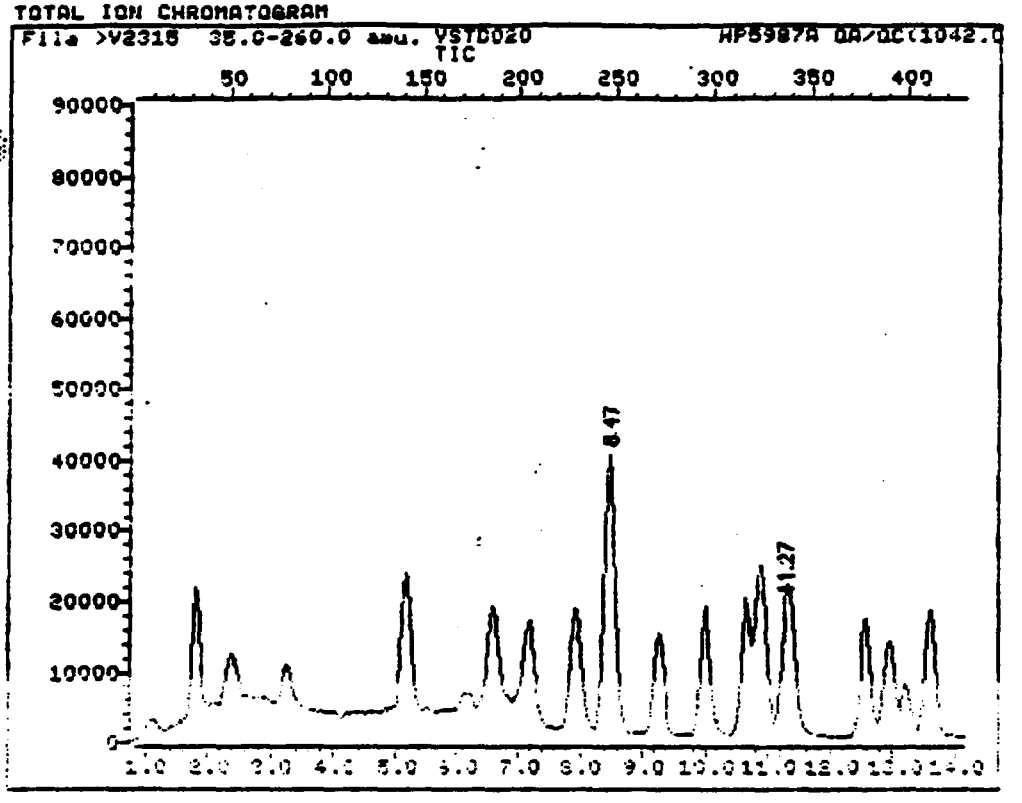
ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	71538	250.00	NG	98
2)	Chloromethane	1.10	50.0	20607	44.88	NG	99
3)	Bromomethane	1.79	94.0	58929M	340.67	NG	91
4)	Vinyl Chloride	2.35	62.0	52315M	237.82	NG	98
5)	Chloroethane	3.25	64.0	37482	135.18	NG	99
6)	Methylene Chloride	5.18	84.0	57766	162.29	NG	68
7)	Acetone	6.17	43.0	19321	135.95	NG	94
8)	Carbon Disulfide	6.58	76.0	137299M	206.66	NG	96
9)	Trichlorofluoromethane-Freon11	7.20	101.0	62074	94.46	NG	98
10)	1,1-Dichloroethene	7.91	96.0	47255	108.19	NG	93
11)	1,1-Dichloroethane	9.25	63.0	84999	79.00	NG	96
12)	1,2-Dichloroethene (total)	9.96	96.0	50735M	107.87	NG	93
13)	Chloroform	10.63	83.0	92604	93.93	NG	99
14)	1,1,2-Cl3F3-Etnane (Freon 113)	10.86	101.0	76598	105.90	NG	96
15)	1,2-Dichloroethene-d4	11.27	65.0	42539M	94.56	NG	93
16)	1,2-Dichloroethane	11.36	62.0	57019	88.69	NG	94
17)	2-Chloroethylvinylether	17.45	106.0	5778	93.39	NG	89
18)	*1,4-Difluorobenzene	18.67	114.0	713149M	250.00	NG	100
19)	2-Butanone	11.39	72.0	7371	135.92	NG	97
20)	1,1,1-Trichloroethane	12.57	97.0	65137	84.85	NG	96
21)	Carbon Tetrachloride	12.92	117.0	49833M	85.96	NG	99
22)	Vinyl Acetate	13.20	43.0	61978	63.66	NG	93
23)	Bromodichloromethane	13.60	83.0	79343	92.48	NG	98
24)	1,2-Dichloropropane	14.87	63.0	56408	85.50	NG	99
25)	cis-1,3-Dichloropropene	15.15	75.0	108733M	106.99	NG	95
26)	Trichloroethene	15.68	130.0	55377	116.51	NG	95
27)	Benzene	16.12	78.0	151209M	99.02	NG	100
28)	Dibromochloromethane	16.37	129.0	59628	103.91	NG	99
29)	trans-1,3-Dichloropropene	16.43	75.0	49243M	71.94	NG	92
30)	1,1,2-Trichloroethane	16.43	97.0	51725	125.18	NG	90
31)	Bromoform	19.01	172.8	42998	110.73	NG	97
32)	*Chlorobenzene-d5	23.45	117.0	231063M	250.00	NG	98
33)	4-Methyl-2-pentanone	19.38	43.0	21387M	92.33	NG	89
34)	2-Hexanone	21.60	43.0	30557M	91.82	NG	91
35)	Tetrachloroethene	21.21	164.0	42642	114.34	NG	97
36)	1,1,2,2-Tetrachloroethane	21.28	83.0	81496	116.55	NG	91
37)	Toluene-d8	22.24	98.0	164356	107.39	NG	100
38)	Toluene	22.43	92.0	104715	116.75	NG	96
39)	Chlorobenzene	23.58	112.0	123829	112.28	NG	99
40)	Ethylbenzene	25.32	106.0	61809	106.81	NG	92
41)	Bromofluorobenzene	27.34	95.0	81325M	100.98	NG	84
42)	Styrene	28.42	104.0	141072	110.98	NG	94
43)	m-Xylene	28.61	106.0	91590M	114.07	NG	94

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Xylene (total)	29.33	106.0	73294M	106.23	NG	93

Compound is ISTD

TOTAL ION CHROMATOGRAM



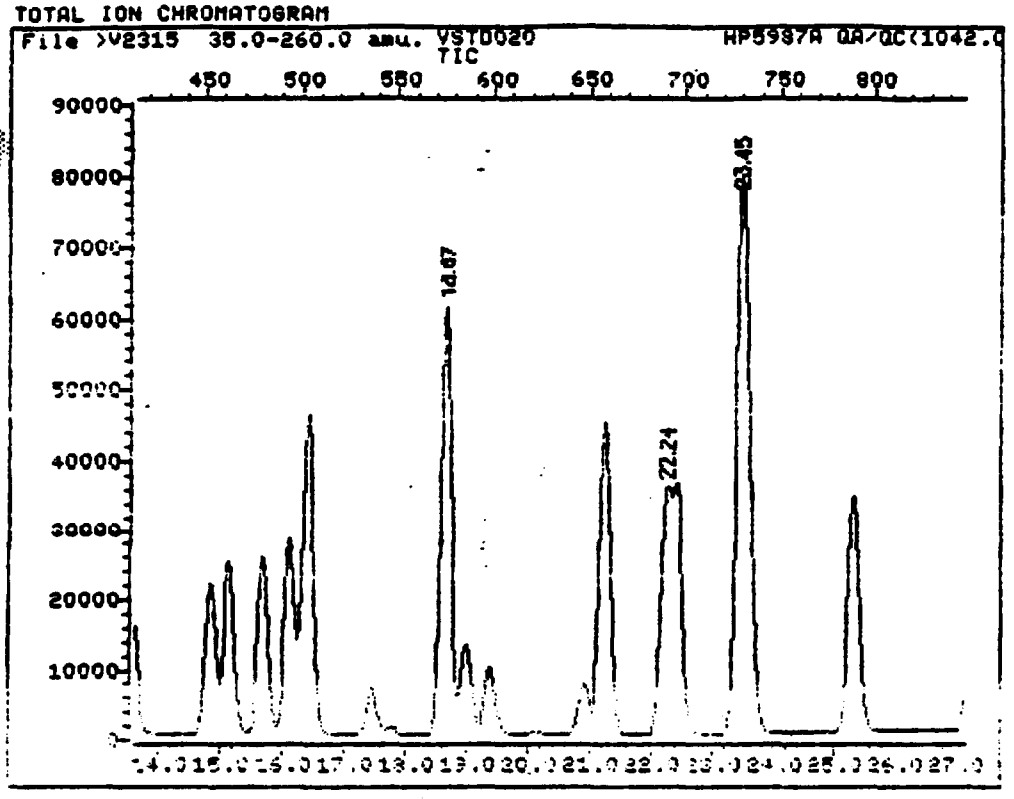
Data File: >V2315:<D2 Quant Output File: ^V2315:<D1.
Name: VSTD020
Misc: HP5987A QA/QC(1042.097.300)P1

Id File: XSVOL.<E>
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:53

Operator ID: KAREN
Quant Time: 890417 13:56
Injected at: 890417 12:53

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



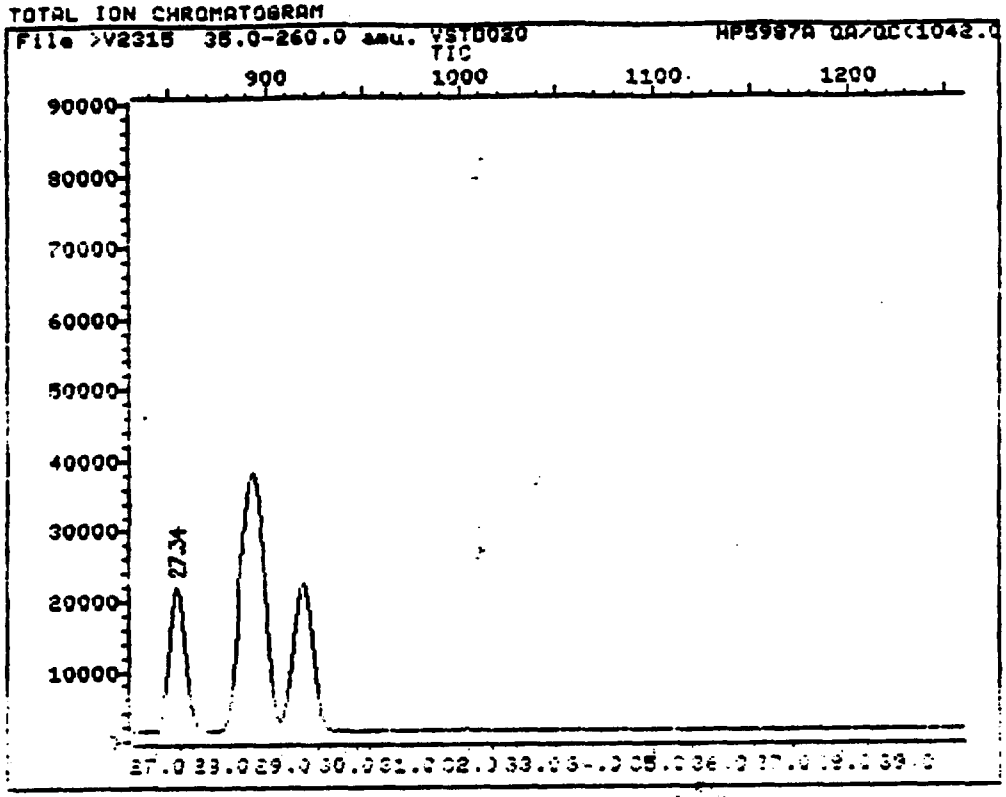
Data File: >V2315::D2 Quant Output File: >V2315::D1
Name: VSTD020
Misc: HP5987A QA/QC(1042.097.300)P1

Id File: IDNML::EX
Title: CLP V04 ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:55

Operator ID: KAREN
Quant Time: 890417 13:56
Injected at: 890417 12:53

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >V2315::D2 Quant Output File: >V2315::D1
Name: VSTD020
Misc: HP5987A QA/QC(1042.097.300)P1

ID File: TOUML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:55

Operator ID: KAREN
Quant Time: 890417 13:56
Injected at: 890417 12:53

TIC page 3 of 3

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890417 12:37
Output File: ^V2314::D1 Injected at: 890417 11:42
Data File: >V2314::D2 Dilution Factor: 1.00000
Name: VSTD050
Misc: HP5987A QA/QC(1042.097.300)P1

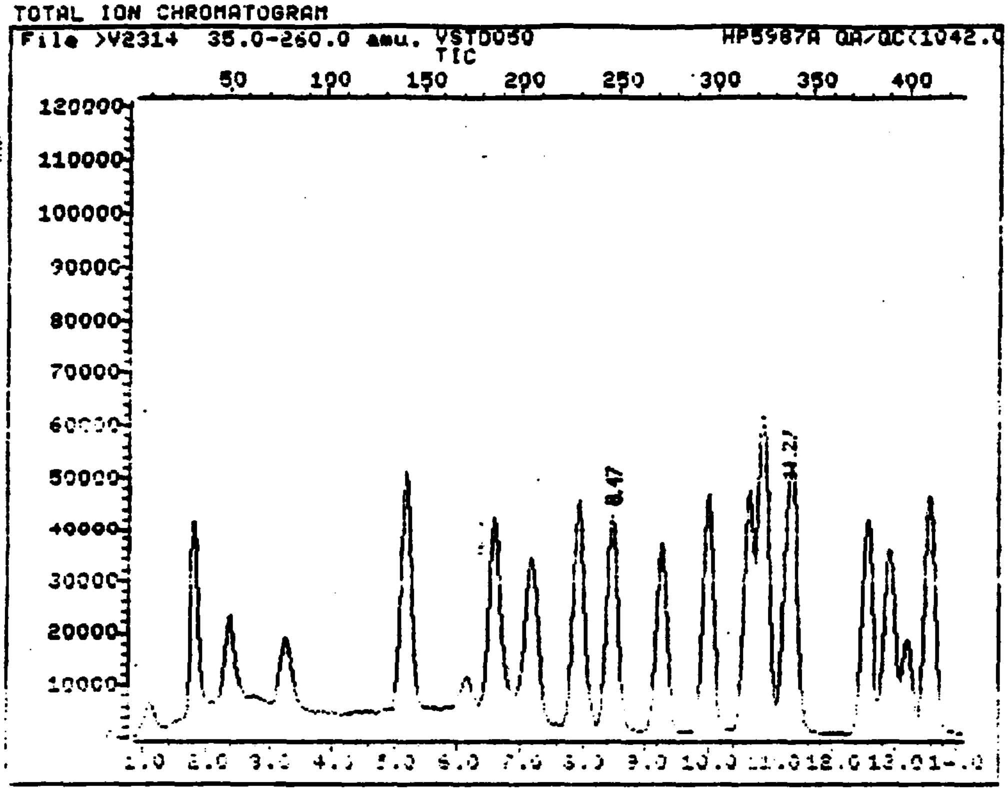
ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	78637	250.00	NG	99
2)	Chloromethane	1.10	50.0	44539M	88.24	NG	93
3)	Bromomethane	1.82	94.0	125086	657.85	NG	90
4)	Vinyl Chloride	2.38	62.0	126375	522.63	NG	98
5)	Chloroethane	3.25	64.0	88774M	291.27	NG	99
6)	Methylene Chloride	5.18	84.0	138590	354.20	NG	68
7)	Acetone	6.14	43.0	39159	250.66	NG	98
8)	Carbon Disulfide	6.58	76.0	341052M	467.01	NG	95
9)	Trichlorofluoromethane-Freon11	7.17	101.0	152557	188.92	NG	97
10)	1,1-Dichloroethene	7.95	96.0	117556	244.85	NG	93
11)	1,1-Dichloroethane	9.33	63.0	204420	172.85	NG	96
12)	1,2-Dichloroethene (total)	10.06	96.0	126912M	256.27	NG	97
13)	Chloroform	10.62	83.0	221563	204.45	NG	98
14)	1,1,2-Cl3F3-Ethane (Freon 113)	10.87	101.0	190781	236.02	NG	96
15)	1,2-Dichloroethane-d4	11.27	65.0	122126M	193.34	NG	91
16)	1,2-Dichloroethane	11.36	62.0	142256	201.50	NG	99
( )	2-Chloroethylvinylether	17.43	106.0	14863	219.79	NG	84
18)	*1,4-Difluorobenzene	13.64	114.0	345519M	250.00	NG	100
19)	2-Butanone	11.40	72.0	15260	255.10	NG	93
20)	1,1,1-Trichloroethane	12.08	97.0	166223	219.58	NG	98
21)	Carbon Tetrachloride	12.92	117.0	127409M	190.25	NG	98
22)	Vinyl Acetate	13.23	43.0	148532M	138.31	NG	92
23)	Bromodichloromethane	13.57	83.0	198836	210.12	NG	99
24)	1,2-Dichloropropane	14.84	63.0	137723	189.25	NG	99
25)	cis-1,3-Dichloropropene	15.16	75.0	274076M	244.48	NG	94
26)	Trichloroethene	15.68	130.0	137359M	262.00	NG	94
27)	Benzene	16.12	78.0	372266M	221.01	NG	100
28)	Dibromochloromethane	16.37	129.0	153837	243.04	NG	99
29)	trans-1,3-Dichloropropene	16.43	75.0	126412M	167.43	NG	93
30)	1,1,2-Trichloroethane	16.43	97.0	124435	273.00	NG	89
31)	Bromoform	19.01	172.8	105363	245.98	NG	99
32)	*Chlorobenzene-d5	23.45	117.0	296201M	250.00	NG	96
33)	4-Methyl-2-pentanone	19.38	43.0	90887M	124.25	NG	97
34)	2-Hexanone	20.71	43.0	87714M	114.38	NG	91
35)	Tetrachloroethene	21.22	164.0	107329	273.09	NG	97
36)	1,1,2,2-Tetrachloroethane	21.25	83.0	177155	240.40	NG	74
37)	Toluene-d8	22.24	98.0	417185	258.66	NG	100
38)	Toluene	22.43	92.0	284419	240.15	NG	99
39)	Chlorobenzene	23.58	112.0	312202	264.34	NG	99
40)	Ethylbenzene	25.32	106.0	147162	241.30	NG	96
41)	Bromofluorobenzene	27.34	95.0	200653M	236.41	NG	94
42)	Styrene	28.40	104.0	328351M	245.10	NG	94
( )	m-Xylene	28.61	106.0	214424M	253.41	NG	96

Compound	R.T.	Q ion	Area	Conc	Units	q
44) Xylene (total)	29.33	106.0	176307M	242.49	NG	96

Compound is ISTD

TOTAL ION CHROMATOGRAM



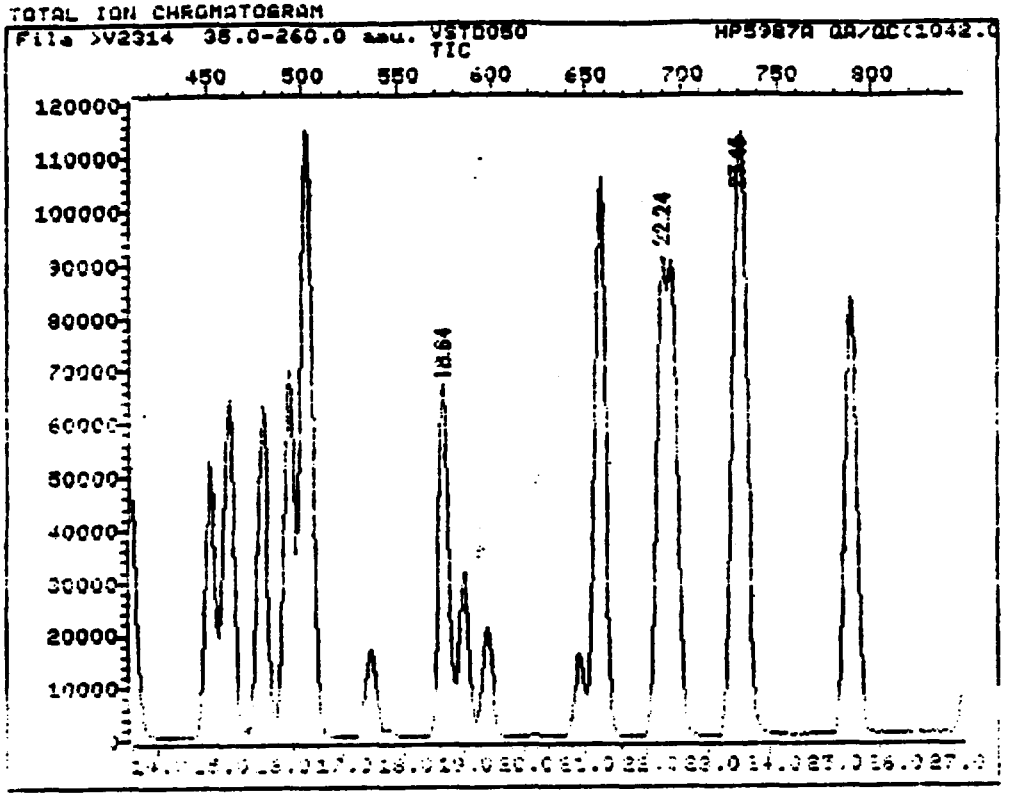
Data File: >V2314::D2 Quant Output File: ^V2314::Q1
Name: VSTD050
Misc: HP5987A QA/QC(1042.077.500)P1

Id File: IDVOL::EK
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

Operator ID: KAREN
Quant Time: 890417 12:37
Injected at: 890417 11:42

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



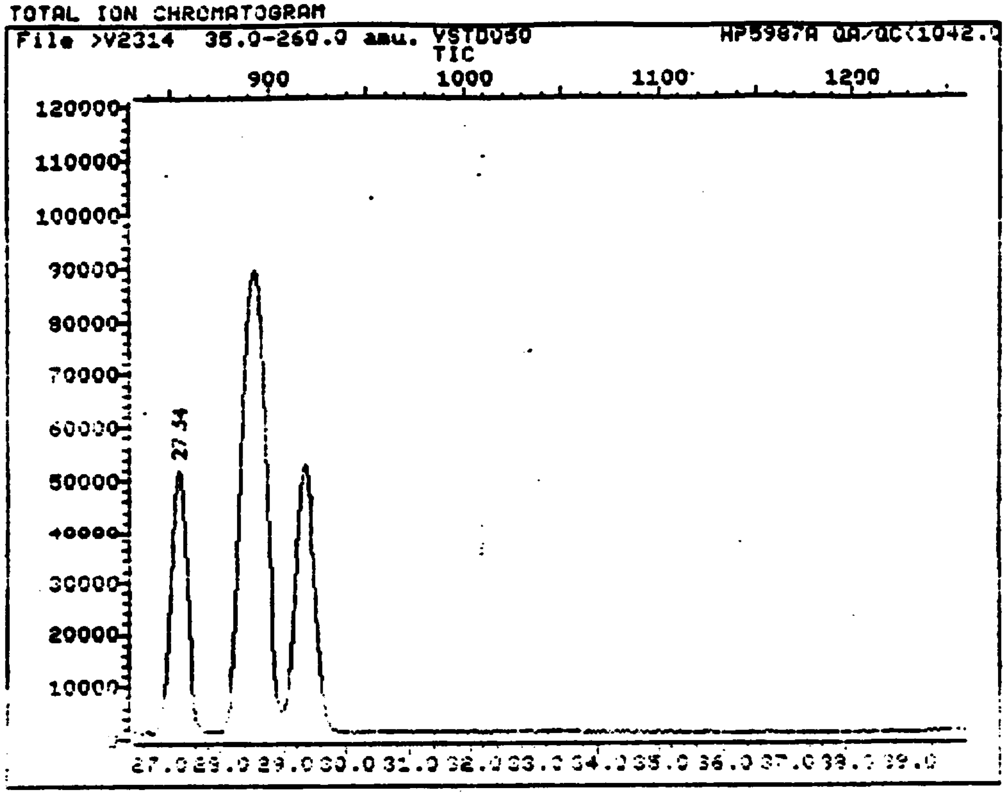
Data File: >V2314:22 Quant Output File: >V2314:21
Name: UNTKNOWN
Misc: HP5987A QA/QC 1042.097.300 P1

ALS File: 10 ML-1C
Title: CLP VOA IC FILE PACKED COLUMN
Last Calibration: 890417 10:55

Operator ID: KAREN
Quant Time: 890417 12:37
Injected at: 890417 11:42

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >V2314::D2   Quant Output File: ^V2314::Q?
Name: VSTD050
Misc: HP5987A QA/QC 10-2 337,560;F1

Id File: IDVOA::SA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:75

Operator ID: KAREN
Quant Time: 890417 12:37
Injected at: 890417 11:42

TIC page 3 of 3

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890417 14:52
Output File: ^V2316::D1 Injected at: 890417 13:56
Data File: >V2316::D2 Dilution Factor: 1.00000
Name: VSTD100
Misc: HP5987A QA/QC(1042.097.300)P1

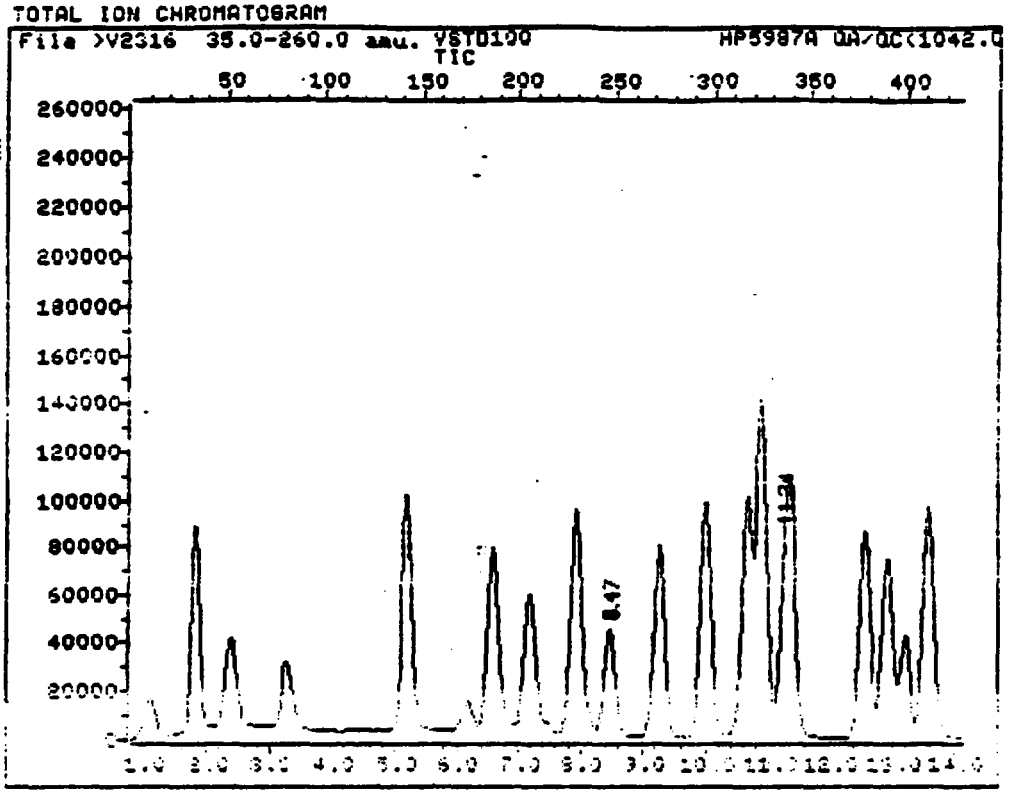
ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	79582	250.00	NG	98
2)	Chloromethane	1.10	50.0	118538	232.07	NG	97
3)	Bromomethane	1.79	94.0	292568	1520.40	NG	91
4)	Vinyl Chloride	2.38	62.0	269102M	1099.67	NG	99
5)	Chloroethane	3.28	64.0	192226	623.21	NG	99
6)	Methylene Chloride	5.18	84.0	289244	730.46	NG	69
7)	Acetone	6.17	43.0	82506	521.86	NG	99
8)	Carbon Disulfide	6.58	76.0	712626M	964.23	NG	94
9)	Trichlorofluoromethane-Freon11	7.17	101.0	294222M	359.84	NG	95
10)	1,1-Dichloroethene	7.91	96.0	249251	512.94	NG	99
11)	1,1-Dichloroethane	9.26	63.0	492427	378.01	NG	98
12)	1,2-Dichloroethene (total)	9.99	96.0	273027	502.26	NG	77
13)	Chloroform	10.05	83.0	479228	436.04	NG	99
14)	1,1,2-C13F3-Ethane (Freon 113)	10.87	101.0	433947	529.45	NG	97
15)	1,2-Dichloroethene-d4	11.24	65.0	285349M	400.65	NG	99
16)	1,2-Dichloroethane	11.36	62.0	283695	405.63	NG	95
17)	2-Chloroethylvinylether	17.46	106.0	52332	479.57	NG	83
18)	*1,4-Difluorobenzene	13.57	114.0	568350	250.00	NG	100
19)	2-Butanone	11.76	72.0	32351M	510.61	NG	95
20)	1,1,1-Trichloroethane	12.54	97.0	74467	495.50	NG	96
21)	Carbon Tetrachloride	12.92	117.0	265214M	391.60	NG	97
22)	Vinyl Acetate	13.20	43.0	342751M	501.34	NG	90
23)	Bromodichloromethane	13.57	83.0	414713	413.77	NG	99
24)	1,2-Dichloropropane	14.84	63.0	294196M	381.69	NG	99
25)	cis-1,3-Dichloropropene	15.12	75.0	589981M	496.89	NG	93
26)	Trichloroethene	15.68	130.0	299633	539.62	NG	92
27)	Benzene	16.12	78.0	816186	457.51	NG	100
28)	Dibromochloromethane	16.34	129.0	326681	487.29	NG	97
29)	trans-1,3-Dichloropropene	16.40	75.0	272827M	341.19	NG	92
30)	1,1,2-Trichloroethane	16.43	97.0	269276	557.79	NG	89
31)	Bromoform	18.98	172.8	228879	504.51	NG	99
32)	*Chlorobenzene-d5	15.48	117.0	508756	250.00	NG	97
33)	4-Methyl-2-pentanone	19.58	43.0	201527	534.55	NG	96
34)	2-Hexanone	20.31	43.0	157194M	521.40	NG	94
35)	Tetrachloroethene	21.22	164.0	232443	367.04	NG	96
36)	1,1,2,2-Tetrachloroethane	21.25	83.0	405715	527.86	NG	81
37)	Toluene-d8	22.24	98.0	865156	514.29	NG	100
38)	Toluene	22.43	92.0	563693	522.76	NG	98
39)	Chlorobenzene	23.59	112.0	670771	544.53	NG	99
40)	Ethylbenzene	25.32	106.0	323565	508.03	NG	93
41)	Bromofluorobenzene	27.34	95.0	430127	485.87	NG	89
42)	Styrene	28.40	104.0	709467M	507.75	NG	94
43)	m-Xylene	28.62	106.0	459532M	520.70	NG	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Xylene (total)	29.33	106.0	376964M	497.09	NG	97

Compound is ISTD

TOTAL ION CHROMATOGRAM

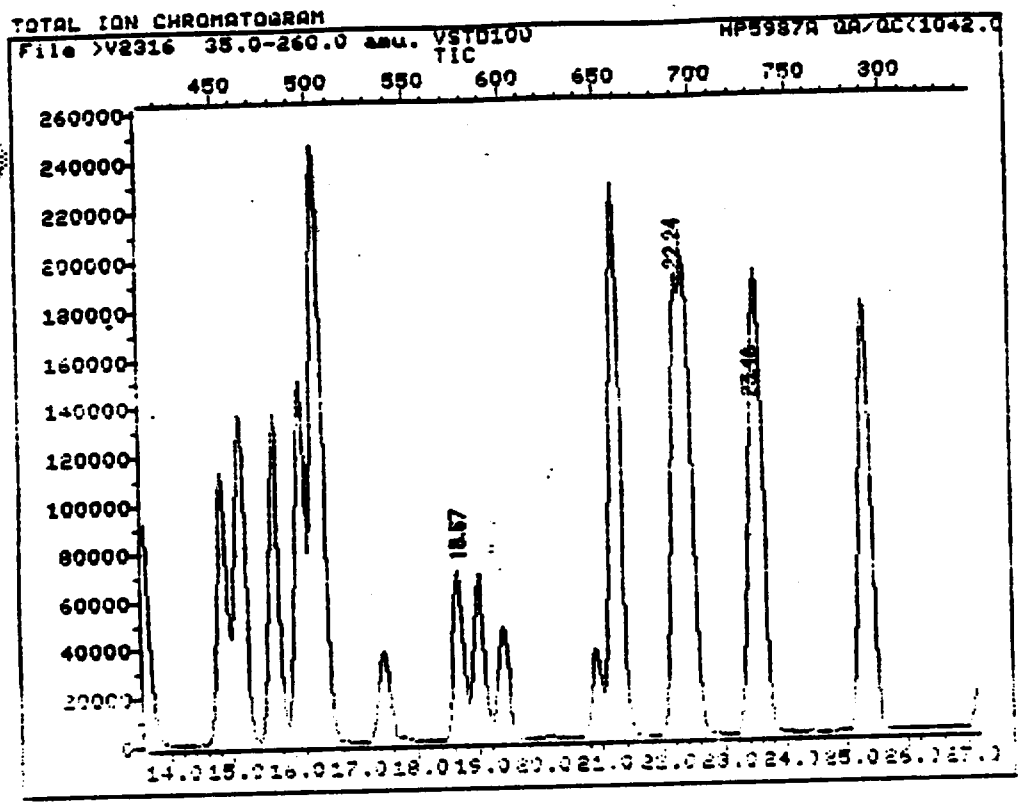


Data File: >V2316::D2 Quant Output File: >V2316::D2.
Name: VSTD100
Misc: HP5973 QA/QC(1042.097.FOR)F1

Lib File: [illegible]
Title: CLP VOA IO FILE (PACKED COLUMN)
Last Calibration: 890417 11:59

Operator ID: KAREN
Quant Time: 890417 14:52
Injected at: 890417 13:56

TIC page 1 of 3



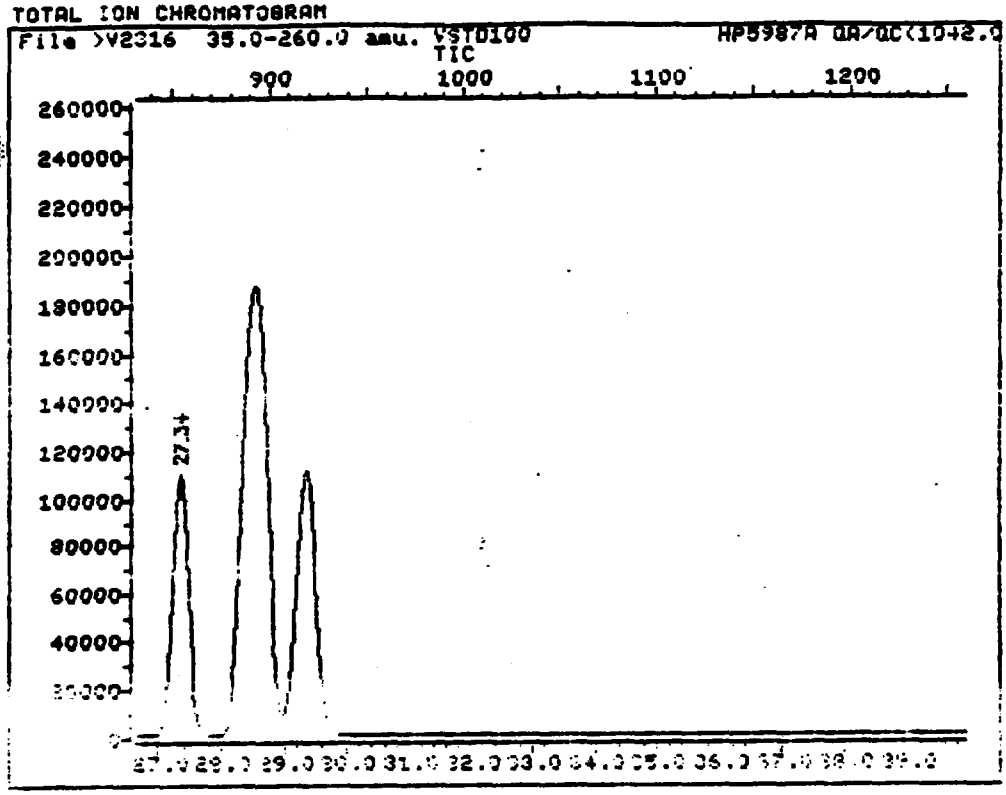
Data File: >V2316::D2 Quant Output File: ^V2316::D1
Name: VSTD100
Misc: HP5987A QA/QC(1042.097.3001)P1

Id File: IDVML::EM
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:55

Operator ID: KAREN
Quant Time: 890417 14:52
Injected at: 890417 13:56

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >V2316::D2 Quant Output File: >V2316::D1
Name: VSTD100
Misc: HP5987A QA/QC(1042.097.300)PL

Id File: [DRUM1:=F
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:??

Operator ID: KAREN
Quant Time: 890417 14:52
Injected at: 890417 13:56

TIC page 3 of 3

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890417 15:54
Output File: ^V2317::D1 Injected at: 890417 14:51
Data File: >V2317::D2 Dilution Factor: 1.00000
Name: VSTD150
Misc: HP5987A QA/QC(1042.097.300)P1

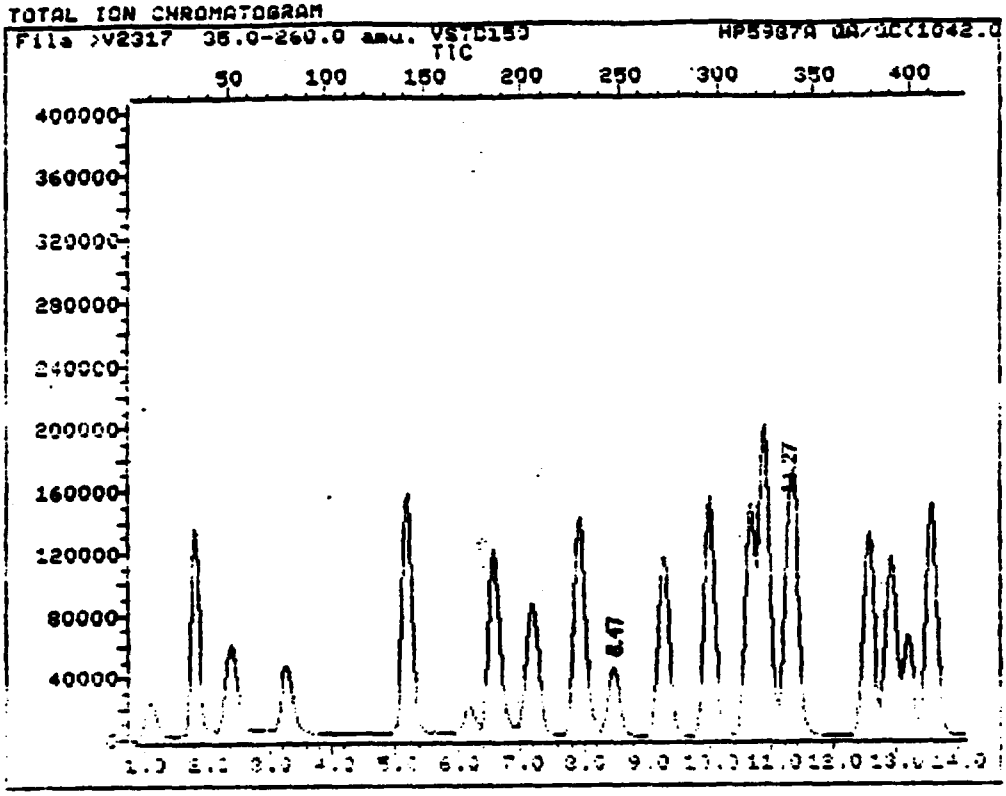
ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	81913	250.00	NG	99
2)	Chloromethane	1.10	50.0	173439M	329.88	NG	97
3)	Bromomethane	1.79	94.0	451500	2279.56	NG	88
4)	Vinyl Chloride	2.38	62.0	427552	1697.44	NG	99
5)	Chloroethane	3.25	64.0	291497M	918.16	NG	99
6)	Methylene Chloride	5.21	84.0	448239	1099.77	NG	74
7)	Acetone	6.17	43.0	126603M	777.99	NG	94
8)	Carbon Disulfide	6.58	76.0	1096123M	1440.93	NG	94
9)	Trichlorofluoromethane-Freon11	7.17	101.0	462175	549.17	NG	95
10)	1,1-Dichloroethene	7.91	96.0	379619	759.06	NG	97
11)	1,1-Dichloroethane	9.23	63.0	703392	570.97	NG	99
12)	1,2-Dichloroethene (total)	9.99	96.0	414501M	740.82	NG	91
13)	Chloroform	10.66	83.0	708172	627.33	NG	99
14)	1,1,2-Cl3F3-Ethane (Freon 113)	10.90	101.0	601305M	714.21	NG	95
15)	1,2-Dichloroethane-d4	11.27	65.0	389854	593.12	NG	84
16)	1,2-Dichloroethane	11.36	62.0	452438	614.66	NG	95
17)	2-Chloroethylvinylether	17.46	106.0	51826	736.48	NG	89
18)	*1,4-Difluorobenzene	10.67	114.0	369871M	250.00	NG	100
19)	2-Butanone	11.39	72.0	53020M	927.96	NG	92
20)	1,1,1-Trichloroethane	12.57	97.0	508569	651.66	NG	94
21)	Carbon Tetrachloride	12.95	117.0	419309M	613.29	NG	97
22)	Vinyl Acetate	13.23	43.0	523086M	455.02	NG	91
23)	Bromodichloromethane	13.60	83.0	649438	641.10	NG	99
24)	1,2-Dichloropropene	14.94	63.0	461224M	592.05	NG	99
25)	cis-1,3-Dichloropropene	15.15	75.0	924619M	770.47	NG	94
26)	Trichloroethene	15.68	130.0	468983	835.65	NG	93
27)	Benzene	16.12	78.0	1264634	701.38	NG	100
28)	Dibromochloromethane	16.37	129.0	507143	748.46	NG	97
29)	trans-1,3-Dichloropropene	16.40	75.0	426831M	528.12	NG	93
30)	1,1,2-Trichloroethane	16.43	97.0	422780	866.48	NG	89
31)	Bromoform	18.98	172.8	365871	797.93	NG	98
32)	*Chlorobenzene-d5	17.46	117.1	324081	250.00	NG	99
33)	4-Methyl-2-pentanone	19.32	43.0	528646	428.52	NG	97
34)	2-Hexanone	20.91	43.0	275521	447.16	NG	97
35)	Tetrachloroethene	21.25	164.0	345236	800.87	NG	97
36)	1,1,2,2-Tetrachloroethane	21.28	83.0	652746	807.59	NG	91
37)	Toluene-d8	22.24	98.0	1344176	759.83	NG	100
38)	Toluene	22.43	92.0	833348	734.59	NG	99
39)	Chlorobenzene	23.53	112.0	1024915	791.18	NG	99
40)	Ethylbenzene	25.32	106.0	497163	743.24	NG	94
41)	Bromofluorobenzene	27.34	95.0	651553M	700.20	NG	87
42)	Styrene	28.40	104.0	1112361M	757.05	NG	92
43)	m-Xylene	28.62	106.0	718243M	773.90	NG	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	Xylene (total)	29.33	106.0	588285M	737.68	NG	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



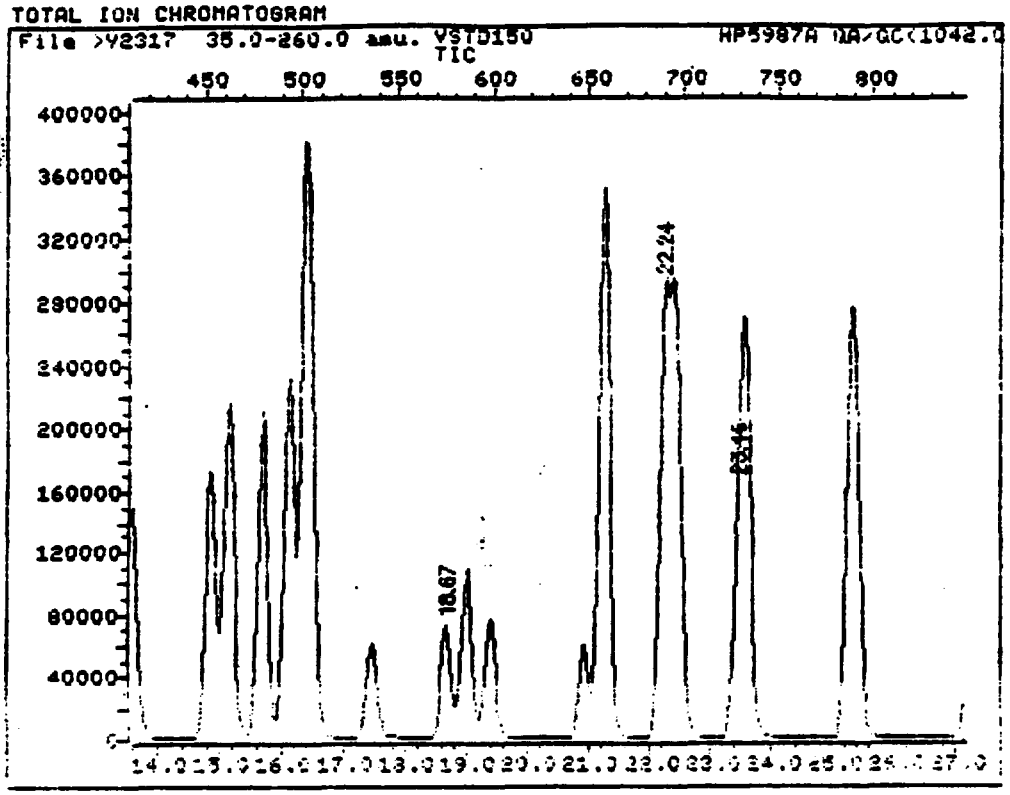
Data File: >V2317:1:D1 Quant Output File: >V2317:1:D1
Name: VSTD150
Misc: HP5987A QA/QC(1041.097.310)P1

IN File: ICVML: CX
Title: ILF VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:39

Operator ID: KAREN
Quant Time: 890417 15:54
Injected at: 890417 14:51

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



Data File: >V2317::D1 Quant Output File: ^V2317::Q1
Name: VSTD150
Misc: HP5987A QA/QC(1042.097.300)P1

Ic File: ID:NL::EP
Title: CLP V04 IC FILE (PACKED COLUMN)
Last Calibration: 890417 12:55

Operator ID: KAREN
Quant Time: 890417 15:54
Injected at: 890417 14:51

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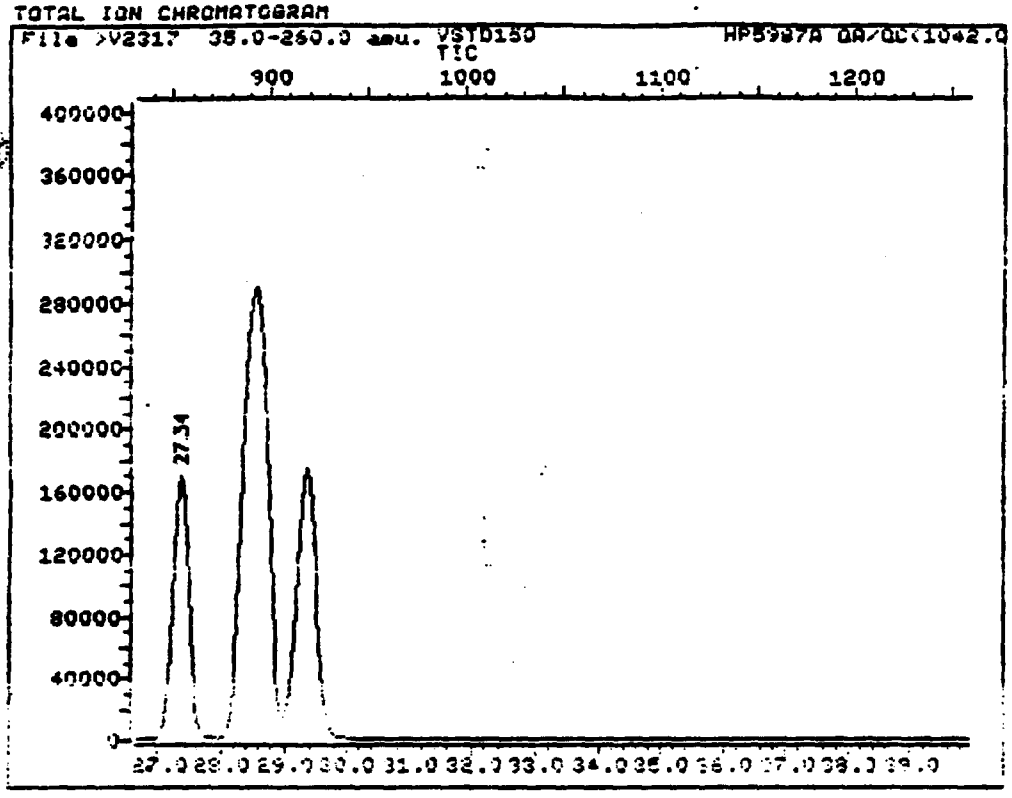
TOTAL ION CHROMATOGRAM



Data File: >V2317:D2 Quant Output File: ^V2317:D1
Name: VSTD150
Misc: HP5987A QA/QC(1042.097.300)F1

Title: CLP VOA 10 FILE (PACKED COLUMN)
Last Calibration: 390417 12:55

Operator ID: KAREN
Quant Time: 390417 15:54
Injected at: 390417 14:51

TIC page 2 of 3

QUANT REPORT

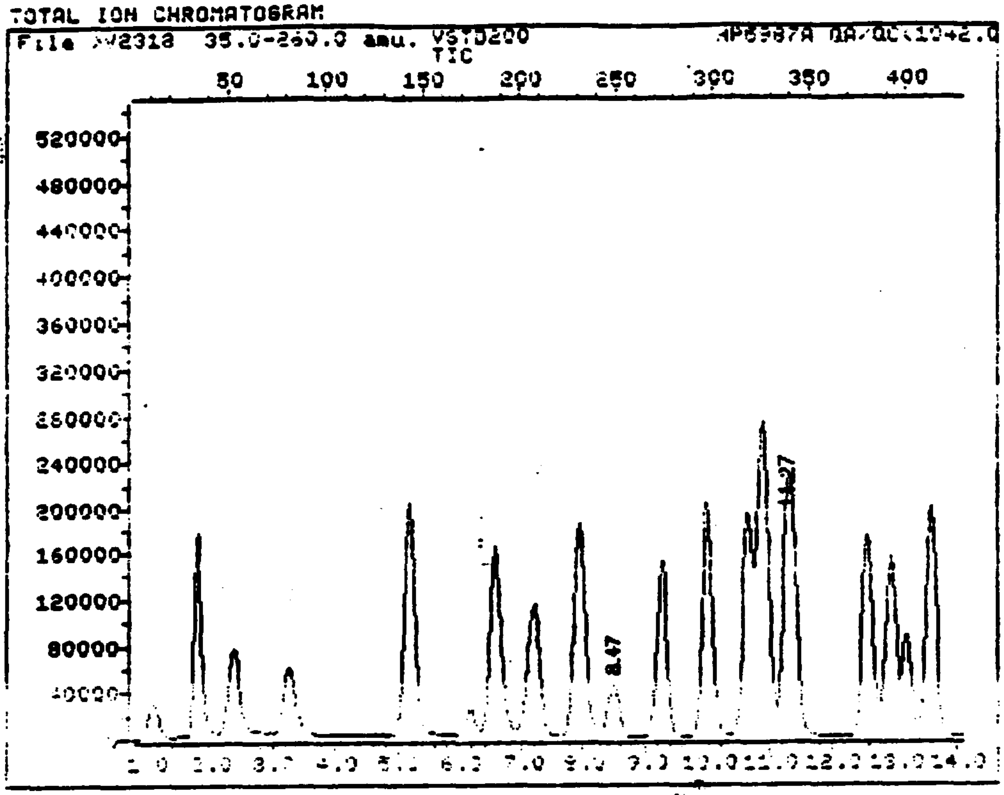
Operator ID: KAREN Quant Rev: 6 Quant Time: 890417 16:29
Output File: ^V2318::D1 Injected at: 890417 15:41
Data File: >V2318::D2 Dilution Factor: 1.00000
Name: VSTD200
Misc: HP5987A QA/QC(1042.097.300)P1

ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:35

	Compound	R.T.	Q ion	Area	Conc	Units	Q
1)	*Bromochloromethane	8.47	128.0	81869	250.00	NG	99
2)	Chloromethane	1.10	50.0	223676	425.66	NG	98
3)	Bromomethane	1.82	94.0	582732M	2943.72	NG	87
4)	Vinyl Chloride	2.38	62.0	562734	2235.33	NG	99
5)	Chloroethane	3.28	64.0	397240	1251.90	NG	98
6)	Methylene Chloride	5.21	84.0	587762	1442.87	NG	76
7)	Acetone	6.17	43.0	166803	1025.57	NG	96
8)	Carbon Disulfide	6.58	76.0	1472901M	1937.27	NG	94
9)	Trichlorofluoromethane-Freon11	7.23	101.0	624352	742.27	NG	96
10)	1,1-Dichloroethene	7.94	96.0	506352	1013.01	NG	99
11)	1,1-Dichloroethene	9.28	63.0	919381	746.71	NG	98
12)	1,2-Dichloroethene (total)	9.99	96.0	3e3065	1006.88	NG	9[illegible]
13)	Chloroform	10.63	83.0	748667	840.82	NG	99
14)	1,1,2-Cl3F3-Ethane (Freon 113)	10.90	101.0	855244	1014.01	NG	96
15)	1,2-Dichloroethane-d4	11.27	65.0	519672	789.52	NG	95
16)	1,2-Dichloroethane	11.36	62.0	603415	820.17	NG	97
17)	2-Chloroethylvinylether	17.46	106.0	71509	1012.51	NG	99
18)	1,4-Difluorobenzene	18.67	114.0	581224M	250.00	NG	100
19)	2-Butanone	11.39	72.0	60470M	1057.39	NG	93
20)	1,1,1-Trichloroethane	12.58	97.0	5[illegible]	852.39	NG	99
21)	Carbon Tetrachloride	12.95	117.0	552476M	785.06	NG	97
22)	Vinyl Acetate	13.23	43.0	710885	599.96	NG	90
23)	Bromodichloromethane	13.60	83.0	871774	834.95	NG	99
24)	1,2-Dichloropropane	14.38	63.0	612454M	762.76	NG	99
25)	cis-1,3-Dichloropropene	15.16	75.0	1228285M	993.03	NG	95
26)	Trichloroethene	15.68	130.0	609492	1053.67	NG	96
27)	Benzene	16.12	78.0	1621593M	872.56	NG	100
28)	Dibromochloromethane	16.37	129.0	682894	977.82	NG	97
29)	trans-1,3-Dichloropropene	16.43	75.0	576509M	692.08	NG	94
30)	1,1,2-Trichloroethane	16.46	97.0	561607	1116.73	NG	90
31)	Bromoform	19.01	172.8	490295	1037.44	NG	99
32)	*Chlorobenzene-d5	23.46	117.0	323590	250.00	NG	99
33)	4-Methyl-2-pentanone	19.33	43.0	4[illegible]7147	738.41	NG	1[illegible]
34)	2-Hexanone	20.91	43.0	567014M	805.30	NG	1[illegible]
35)	Tetrachloroethene	21.25	164.0	467557	1089.76	NG	96
36)	1,1,2,2-Tetrachloroethane	21.28	83.0	895129	1112.71	NG	92
37)	Toluene-d8	22.25	98.0	1808808	1027.31	NG	100
38)	Toluene	22.43	92.0	1100418M	975.18	NG	9[illegible]
39)	Chlorobenzene	23.58	112.0	1358597	1053.73	NG	99
40)	Ethylbenzene	25.35	106.0	654970	983.79	NG	96
41)	Bromofluorobenzene	27.34	95.0	863230M	933.80	NG	84
42)	Styrene	23.40	104.0	1503606M	1028.14	NG	96
43)	m-Xylene	28.62	106.0	980744M	1061.75	NG	93

Compound	R.T.	Q ion	Area	Conc	Units	q
44) Xylene (total)	29.37	106.0	803225M	1018.27	NG	92

Compound is ISTD



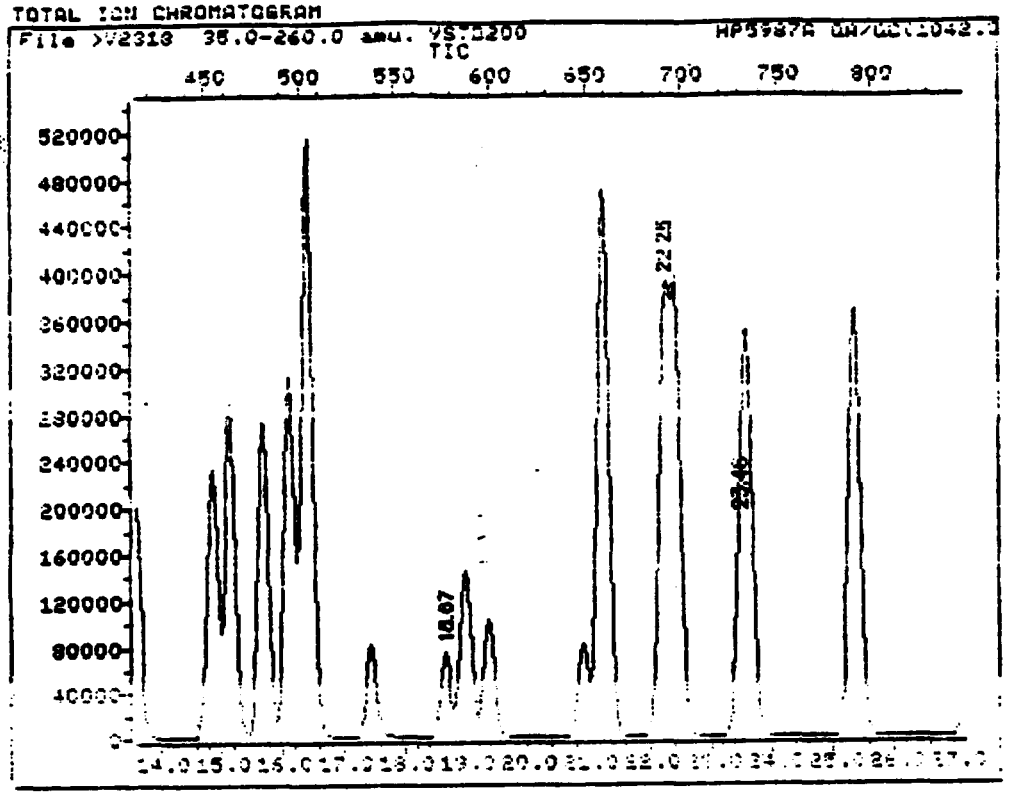
Data File: >V2318::D2 Quant Output File: ^V2318::Q1
Name: VSTD200
Misc: HP5987A QA/QC[1042 097 730,P1

Id File: ID[illegible]::[illegible]
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:75

Operator ID: KAREN
Quant Time: 890417 16:29
Injected at: 890417 15:41

TIC page 1 of 5

TOTAL ION CHROMATOGRAM



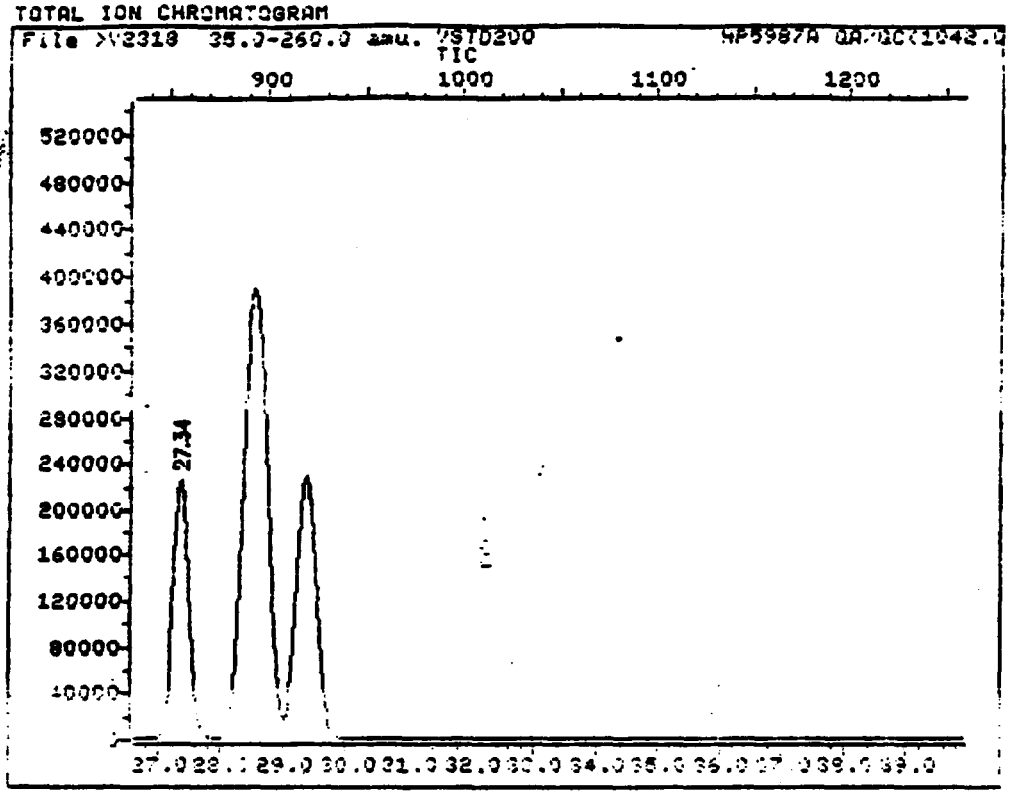
Data File: >V2318::D2 Quant Output File: ^V2318::D1
Name: VSTD20[illegible]
Misc: HP5987A 89/02;1041.097 300 F1

ID File: IDUMP.ID
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890417 12:55

Operator ID: KAREN
Quant Time: 890417 16:29
Injected at: 890417 15:41

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >V2318::D2 Quant Output File: >V2F10::D1
Name: >STD200
File: HP5973A QA/QC(1042.097.30)::1

ID File: ICAL::ID
Title: CLP V0A ID FILE (PACKED COLUMN)
Last Calibration: 890417 11:58

Operator ID: KAREN
Quant Time: 890417 16:29
Injected at: 890417 15:41

TIC page 3 of 3

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/18/89

Contractor: ORG Laboratories, Inc Time: 09:19

Contract No: Laboratory ID: >U2328

Instrument ID: HP 5987A Initial Calibration Date: 04/18/89

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.68402	.65639	4.04		**	
Bromomethane	1.81189	1.61749	10.73			
Vinyl Chloride	1.71685	1.57312	8.37	*		
Chloroethane	1.20915	1.05836	12.47			
Methylene Chloride	1.84345	1.67383	9.26			
Acetone	.58399	.59734	2.29			
Carbon Disulfide	4.51414	4.04921	10.30			
Trichlorofluoromethane-Freon11	1.94983	1.91996	1.49			
1,1-Dichloroethene	1.66864	1.43134	8.78	*		
1,1-Dichloroethane	2.81445	2.60952	7.55		**	
1,2-Dichloroethene (total)	1.78169	1.56189	8.26			
Chloroform	2.94741	2.75123	7.29	*		
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.59977	1.56181	2.26			(Conc=247.50)
1,2-Dichloroethane-d4	1.68541	1.62756	4.36			
1,2-Dichloroethane	1.85985	1.70989	8.06			
2-Chloroethylvinylether	.20518	.18709	8.82			
2-Butanone	.08799	.08418	7.92			
1,1,1-Trichloroethane	.48805	.44761	8.29			
Carbon Tetrachloride	.37389	.34599	7.46			
Vinyl Acetate	.46609	.40084	14.00			
Bromodichloromethane	.58666	.55021	6.18			
1,2-Dichloropropane	.41361	.38046	8.01	*		
cis-1,3-Dichloropropene	.68432	.62749	8.30			(Conc=300.00)
Trichloroethene	.41425	.37668	9.07			
Benzene	1.12058	1.03975	7.21			
Dibromochloromethane	.45447	.42466	6.56			
trans-1,3-Dichloropropene	.47159	.44871	9.25			(Conc=200.00)
1,1,2-Trichloroethane	.32884	.30114	7.41			
Toluene	.39242	.29844	7.41		**	
4-Methyl-2-pentanone	.33441	.27695	17.17			
2-Hexanone	.26856	.22949	14.55			
Tetrachloroethene	.36671	.33608	8.35			

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/18/89

Contractor: ORG Laboratories,Inc Time: 09:19

Contract No: Laboratory ID: >U2328

Instrument ID: HP 5987A Initial Calibration Date: 04/18/89

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,1,2,2-Tetrachloroethane	.66828	.59977	10.25		**	
Toluene-d8	1.40964	1.34687	4.91			
Toluene	.88157	.84939	3.65	*		
Chlorobenzene	1.07217	1.02733	4.18		**	
Ethylbenzene	.51736	.47814	7.58	*		
Bromofluorobenzene	.68694	.63788	7.15			
Styrene	1.14388	1.08669	6.57			
m-Xylene	.75249	.70478	6.41			(Conc=251.00)
Xylene (total)	.61715	.56771	8.01			

RF - Response Factor from daily standard file at 250.00 NG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

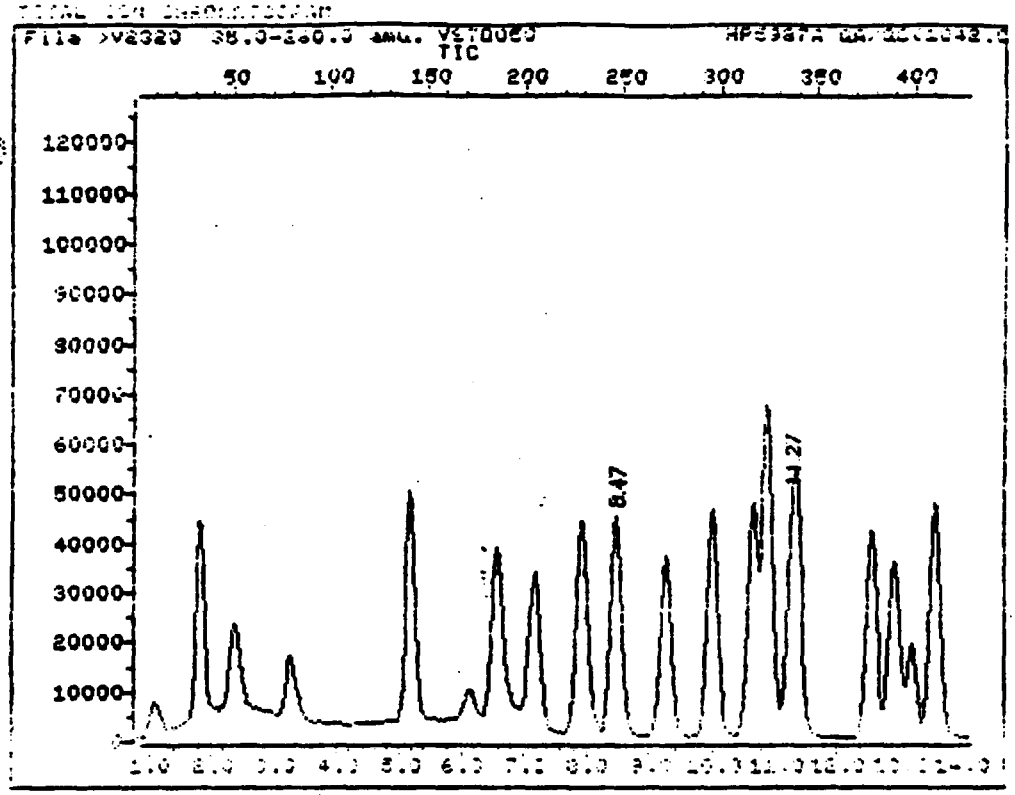
Operator ID: KAREN Quant Rev: 6 Quant Time: 890418 10:15
Output File: >V2320::D1 Injected at: 890418 09:19
Data File: >V2320::D2 Dilution Factor: 1.00000
Name: VSTD050
Misc: HP5987A QA/QC(1042.097.300)P1

ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 08:42

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.47	128.0	91449M	250.00	NG	99
2)	Chloromethane	1.07	50.0	53462M	239.90	NG	93
3)	Bromomethane	1.79	94.0	131743M	223.18	NG	92
4)	Vinyl Chloride	2.35	62.0	128129	229.07	NG	97
5)	Chloroethane	3.25	64.0	86202M	218.82	NG	99
6)	Methylene Chloride	5.18	84.0	136250M	226.86	NG	72
7)	Acetone	6.14	43.0	42951M	242.69	NG	99
8)	Carbon Disulfide	6.58	76.0	329804M	224.25	NG	95
9)	Trichlorofluoromethane-Freon11	7.20	101.0	156378	246.27	NG	97
10)	1,1-Dichloroethene	7.91	96.0	116585	229.29	NG	95
11)	1,1-Dichloroethane	9.25	63.0	212543	231.62	NG	97
12)	1,2-Dichloroethene (total)	10.00	96.0	127149M	229.54	NG	78
13)	Chloroform	10.62	83.0	224085	231.79	NG	96
14)	1,1,2-Cl3F3-Ethane (Freon 113)	10.87	101.0	204893	241.91	NG	97
15)	1,2-Dichloroethane-d4	11.27	65.0	124402	237.85	NG	85
16)	1,2-Dichloroethane	11.34	62.0	139269M	229.04	NG	90
17)	2-Chloroethylvinylether	12.42	106.0	13253	217.95	NG	58
18)	*1,4-Difluorobenzene	13.94	114.0	373220	250.00	NG	100
19)	2-Butanone	11.31	72.0	11489	250.21	NG	94
20)	1,1,1-Trichloroethane	11.58	97.0	167064	233.11	NG	97
21)	Carbon Tetrachloride	11.91	117.0	119151M	231.74	NG	98
22)	Vinyl Acetate	13.20	43.0	149603	215.00	NG	91
23)	Bromodichloromethane	13.57	83.0	205350	234.55	NG	99
24)	1,2-Dichloropropane	14.84	63.0	141996M	229.96	NG	99
25)	cis-1,3-Dichloropropene	15.12	75.0	231030M	275.09	NG	95
26)	Trichloroethene	15.31	130.0	140834	227.37	NG	98
27)	Benzene	16.12	78.0	338055	231.99	NG	100
28)	Dibromochloromethane	16.37	129.0	158491	233.60	NG	99
29)	trans-1,3-Dichloropropene	16.40	75.0	133973	189.49	NG	94
30)	1,1,2-Trichloroethane	16.43	97.0	130641	231.48	NG	93
31)	Bromoform	16.98	172.8	111391	231.42	NG	99
32)	*Chlorobenzene-d5	23.45	117.0	323725M	250.00	NG	97
33)	4-Methyl-2-pentanone	19.53	43.0	94610M	217.98	NG	81
34)	2-Hexanone	20.71	43.0	74297M	218.64	NG	96
35)	Tetrachloroethene	21.21	164.0	108747	229.11	NG	97
36)	1,1,2,2-Tetrachloroethane	21.25	83.0	194102	224.37	NG	91
37)	Toluene-d8	22.24	98.0	435755	238.72	NG	100
38)	Toluene	22.43	92.0	274968	240.87	NG	93
39)	Chlorobenzene	23.55	112.0	332572	239.54	NG	100
40)	Ethylbenzene	25.32	106.0	154787	231.85	NG	99
41)	Bromofluorobenzene	27.34	95.0	306472M	232.12	NG	97
42)	Styrene	28.40	104.0	351790M	233.59	NG	91
43)	m-Xylene	28.61	106.0	228906M	234.92	NG	93

Compound	R.T.	R.R.T.	Area	Conc.	Units	
44) Xylene (total)	29.33	106.0	183778M	229.97	NG	96

Compound is ISTD

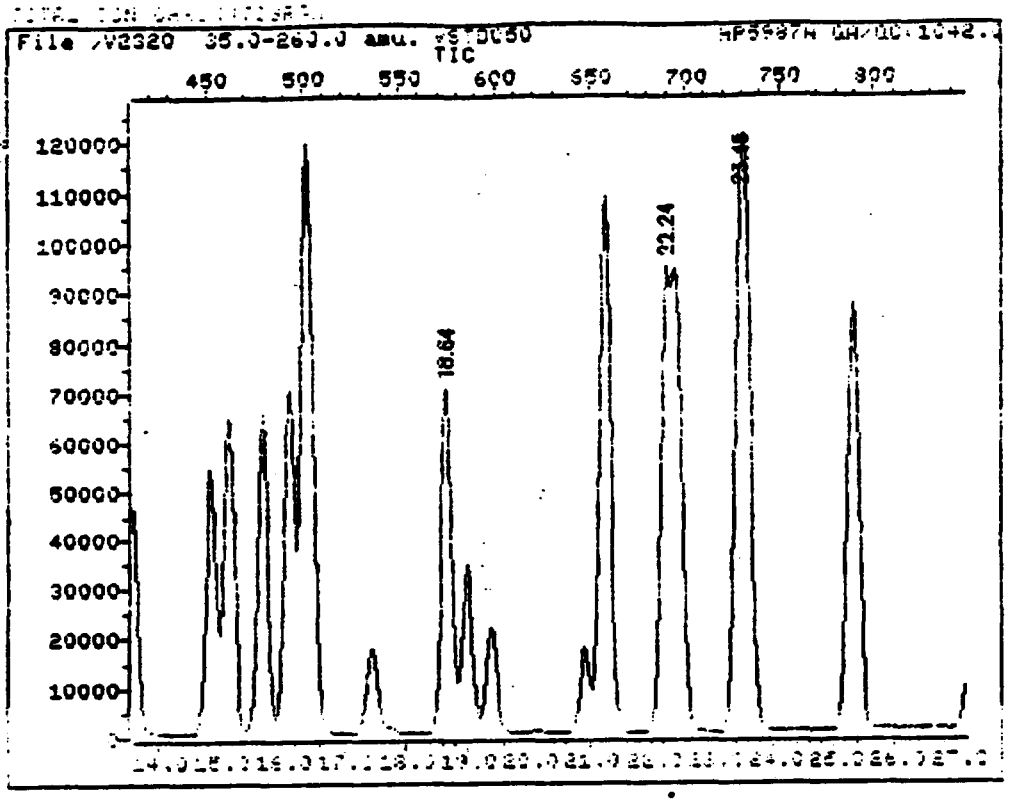


Data File: ^V2320::D2 Quant Output File: ^V2320::D1
Name: VSTD050
Meth: HP5987A QA/QC(1042.097.300)F1 *

ID File: ID[VOL]:EM
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 08:40

Operator ID: KAREN
Quant Time: 890418 10:15
Injected at: 890418 09:19

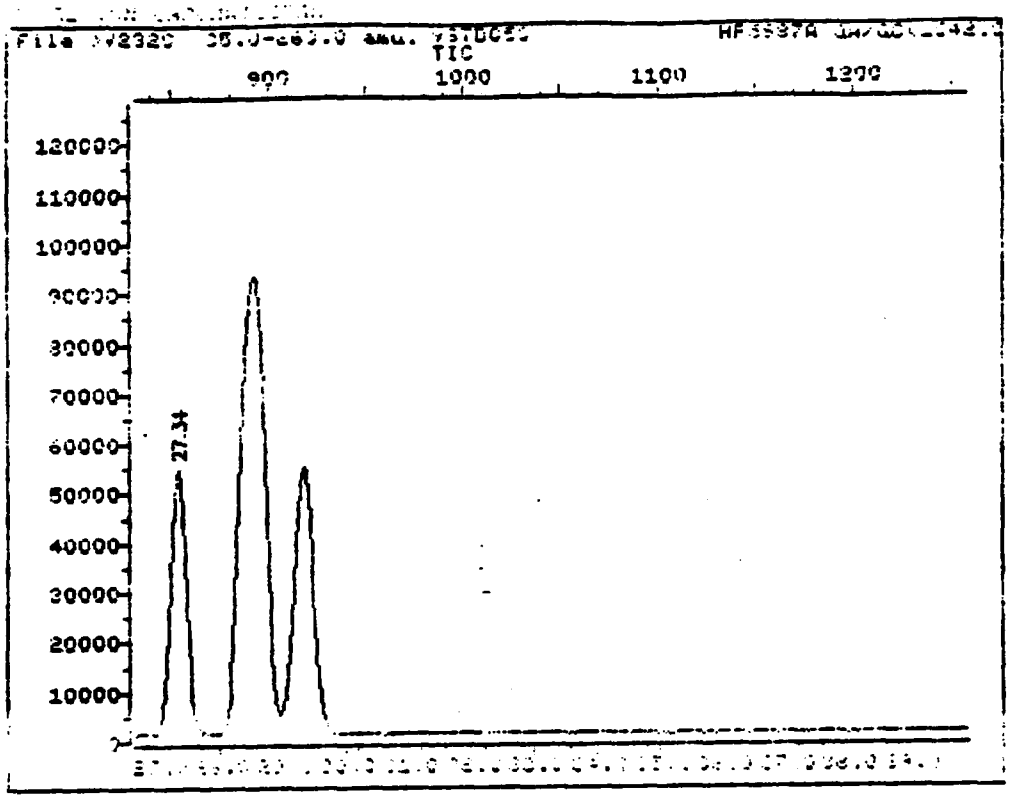
TIC page 1 of 3



Data File: /V2320::02 Quant Output File: /V2320::01
Name: 8570050
Misc: HP5987A QA/QC(1042.097.300)P1

Lib File: LOWPL::E:
Title: CLP 8/84 10 FILE (PACKED COLUMN
Last Calibration: 890413 08:41

Operator ID: KAREN
Quant Time: 890418 10:19
Injected at: 890418 09:19



Data File: [illegible] Quant Output File: [illegible]

Name: [illegible]

Title: HP59974 GA/GC(10)42.0[illegible]

Data Path: [illegible]

File: DEF VOA ID FILE [illegible]

Last Calibration: 890413 08:42

Operator ID: KAREN

Quant Time: 890413 10:15

Injected at: 890413 09:19

TIC page [illegible]

Continuing Calibration Check
HSL Compounds

Case No: ______________________ Calibration Date: 04/19/89

Contractor: ORG Laboratories, Inc Time: 09:28

Contract No: ______________________ Laboratory ID: >V2328

Instrument ID: HP 5987A Initial Calibration Date: 04/18/89

Minimum $\overline{RF}$ for SPCC is 0.300 Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.68402	.76673	12.09		**	
Bromomethane	1.81189	1.64914	8.98			
Vinyl Chloride	1.71685	1.59220	7.26	*		
Chloroethane	1.20915	1.05594	12.67			
Methylene Chloride	1.84345	1.62249	11.99			
Acetone	.54377	.47743	13.05			
Carbon Disulfide	4.51414	3.97638	11.91			
Trichlorofluoromethane-Freon11	1.94905	1.72332	11.58			
1,1-Dichloroethene	1.56064	1.42670	8.58	*		
1,1-Dichloroethane	2.81645	2.58841	8.10		**	
1,2-Dichloroethene (total)	1.70169	1.52979	10.10			
Chloroform	2.96741	2.72439	8.19	*		
1,1,2-Cl3F3-Ethane (Freon 113)	2.59977	2.41559	7.09			(Conc=247.50)
1,2-Dichloroethane-d4	1.60541	1.47744	7.97			
1,2-Dichloroethane	1.85985	1.65696	10.91			
2-Chloroethylvinylether	.20518	.18517	9.75			
2-Butanone	.34798	.40070	15.16			
1,1,1-Trichloroethane	.48005	.42062	12.38			
Carbon Tetrachloride	.37389	.32555	12.93			
Vinyl Acetate	.46609	.37902	18.68			
Bromodichloromethane	.58646	.52752	10.05			
1,2-Dichloropropane	.41361	.37682	8.89	*		
cis-1,3-Dichloropropene	.68432	.58930	13.88			(Conc=300.00)
Trichloroethene	.41429	.36647	11.53			
Benzene	1.12050	.99410	11.28			
Dibromochloromethane	.45447	.39897	12.21			
trans-1,3-Dichloropropene	.47359	.40750	13.96			(Conc=200.00)
1,1,2-Trichloroethane	.37304	.32376	11.71			
Bromoform	.32247	.27715	14.04		**	
4-Methyl-2-pentanone	.33441	.28187	15.75			
2-Hexanone	.26896	.22962	14.50			
Tetrachloroethene	.36671	.33760	7.94			

RF - Response Factor from daily standard File at 250.00 NG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 04/19/89

Contractor: CRG Laboratories, Inc | Time: 09:28

Contract No: | Laboratory ID: >U2328

Instrument ID: HP 5987A | Initial Calibration Date: 04/18/89

Minimum $\overline{RF}$ for SPCC is 0.300 | Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,1,2,2-Tetrachloroethane	.66828	.58969	11.76		**	
Toluene-d8	1.40964	1.29805	7.92			
Toluene	.88157	.80879	9.16	*		
Chlorobenzene	1.07217	.98347	8.27		**	
Ethylbenzene	.51736	.47338	8.5[illegible]	*		
Bromofluorobenzene	.68894	.63139	8.39			
Styrene	1.16308	1.06219	8.67			
m-Xylene	.75749	.69158	8.71			(Conc=251.08)
Xylene (total)	.61715	.56677	8.49			

RF - Response Factor from daily standard file at 250.00 NG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

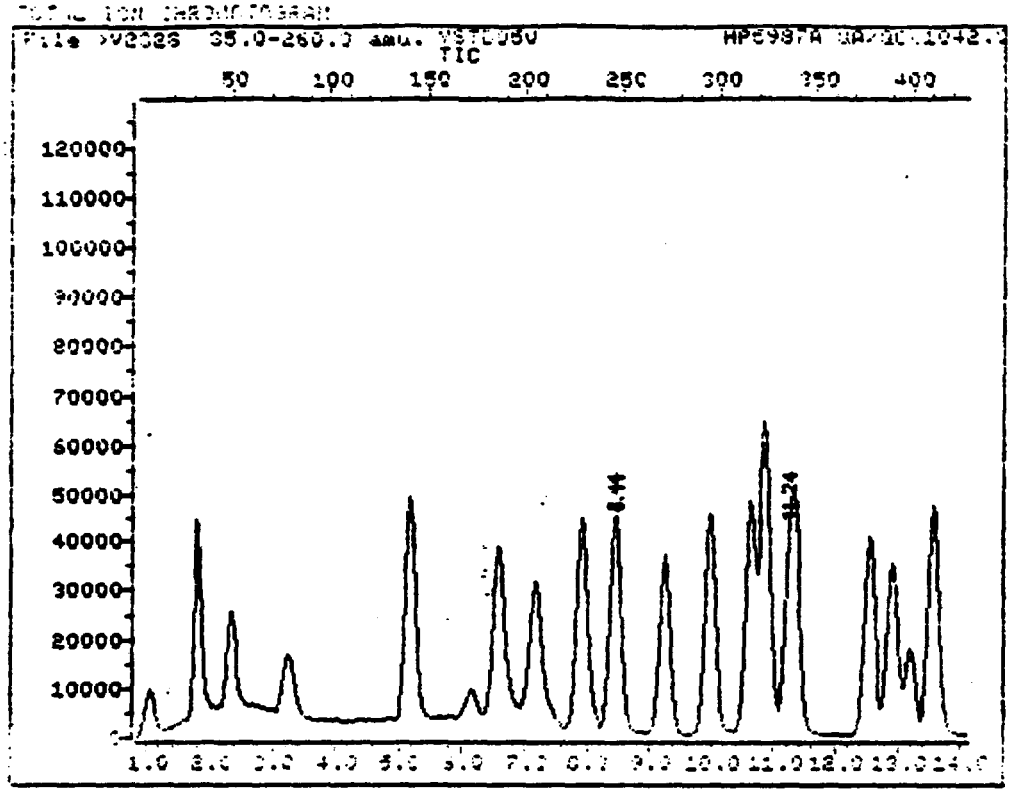
Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 10:16
Output File: >V2328::01 Injected at: 890419 09:23
Data File: >V2328::D2 Dilution Factor: 1.00000
Name: VSTD050
Misc: HP5987A QA/QC(1042.097.300)P1

ID File: IOVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:17

	Compound	R.T.	Q ion	Area	Conc	Units	Q
1)	*Bromochloromethane	8.44	128.0	81442	250.00	NG	96
2)	Chloromethane	1.04	50.0	62444M	280.23	NG	97
3)	Bromomethane	1.79	94.0	134309	227.54	NG	93
4)	Vinyl Chloride	2.35	62.0	129672	231.85	NG	97
5)	Chloroethane	3.25	64.0	85998	218.32	NG	99
6)	Methylene Chloride	5.18	84.0	132139M	220.03	NG	75
7)	Acetone	6.14	43.0	38476	217.42	NG	97
8)	Carbon Disulfide	6.58	76.0	323844M	220.22	NG	95
9)	Trichlorofluoromethane-Freon11	7.17	101.0	140351M	221.05	NG	98
10)	1,1-Dichloroethene	7.92	96.0	116193	228.54	NG	91
11)	1,1-Dichloroethane	9.29	63.0	210305	229.76	NG	99
12)	1,2-Dichloroethene (total)	9.97	96.0	124589M	224.75	NG	84
13)	Chloroform	10.52	83.0	221990M	229.55	NG	99
14)	1,1,2-C13F3-Ethane (Freon 113)	10.87	101.0	194765	229.97	NG	96
15)	1,2-Dichloroethene-d4	11.24	65.0	120326	250.07	NG	53
16)	1,2-Dichloroethane	11.37	62.0	134946	222.75	NG	95
17)	2-Chloroethylvinylether	17.43	106.0	15031	225.62	NG	89
18)	*1,4-Difluorobenzene	18.64	114.0	381913	250.00	NG	100
19)	2-Butanone	11.57	72.0	15545	212.19	NG	75
20)	1,1,1-Trichloroethane	12.55	97.0	160641	219.05	NG	94
21)	Carbon Tetrachloride	12.92	117.0	124557M	207.66	NG	77
22)	Vinyl Acetate	13.20	43.0	144751M	203.30	NG	87
23)	Bromodichloromethane	13.57	83.0	201468	224.87	NG	98
24)	1,2-Dichloropropane	14.35	63.0	143914M	227.77	NG	99
25)	cis-1,3-Dichloropropene	15.15	75.0	270075M	259.35	NG	75
26)	Trichloroethene	15.69	130.0	159961M	221.17	NG	93
27)	Benzene	16.12	78.0	379659	221.80	NG	100
28)	Dibromochloromethane	16.37	129.0	152371	219.47	NG	99
29)	trans-1,3-Dichloropropene	16.43	75.0	124504M	172.09	NG	92
30)	1,1,2-Trichloroethane	16.43	97.0	127466	220.72	NG	91
31)	Bromoform	18.98	172.8	105848	214.90	NG	99
32)	*Chlorobenzene-d5	23.46	117.0	324379	250.00	NG	97
33)	4-Methyl-2-pentanone	19.58	43.0	91025M	211.62	NG	81
34)	2-Hexanone	20.41	43.0	74484M	215.78	NG	77
35)	Tetrachloroethene	21.12	164.0	109710	230.15	NG	71
36)	1,1,2,2-Tetrachloroethane	21.25	83.0	191282	220.60	NG	82
37)	Toluene-d8	22.24	98.0	421060	230.21	NG	100
38)	Toluene	22.43	92.0	259761	227.09	NG	96
39)	Chlorobenzene	23.55	112.0	319015	229.32	NG	99
40)	Ethylbenzene	25.32	106.0	153553	229.75	NG	97
41)	Bromofluorobenzene	27.35	95.0	204810	229.76	NG	98
42)	Styrene	28.27	104.0	344553M	228.31	NG	99
43)	m-Xylene	28.59	106.0	225205M	230.69	NG	95

	Compound	R.T.	Q ion	Area	Conc	Units	
44)	Xylene (total)	29.31	106.0	183198M	228.78	NG	92

Compound is ISTD

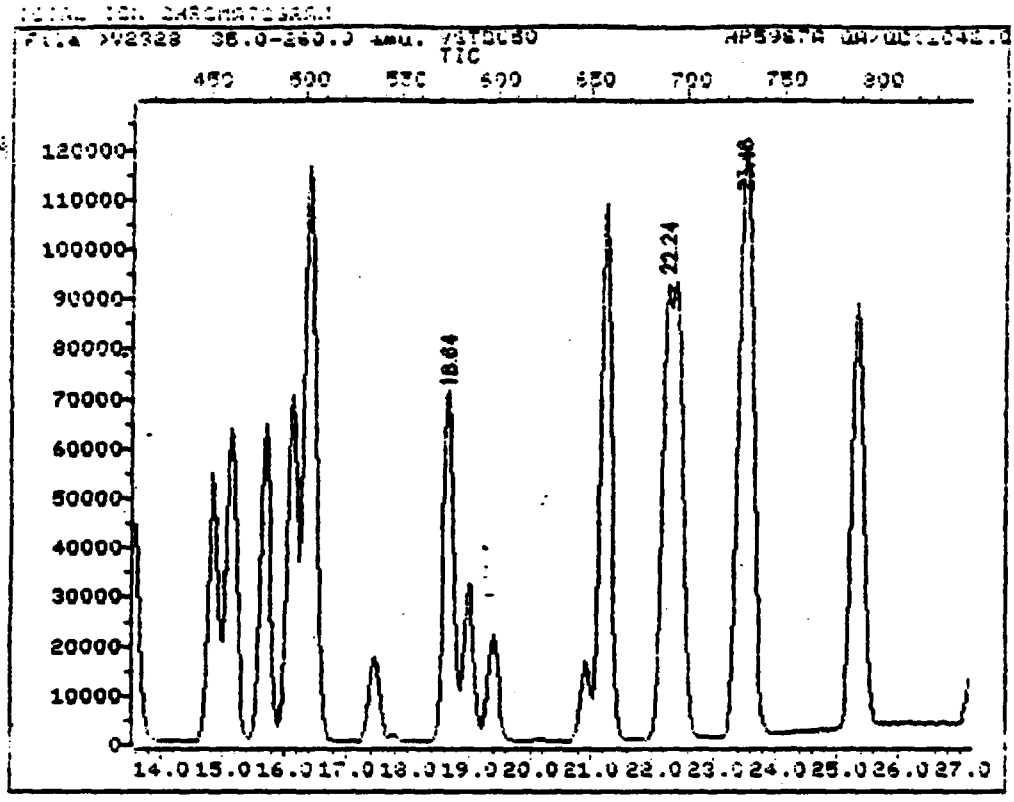


Data File: >V2328::D2 Quant Output File: ^V2328::D1
Name: VSTD050
Misc: HP5973A QA/QC(1042.097.30)PL

ID File: TOXML::ER
Title: CLP 400 ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:17

Operator ID: KAREN
Quant Time: 890419 10:18
Injected at: 890419 09:28

TIC page 1 of 5

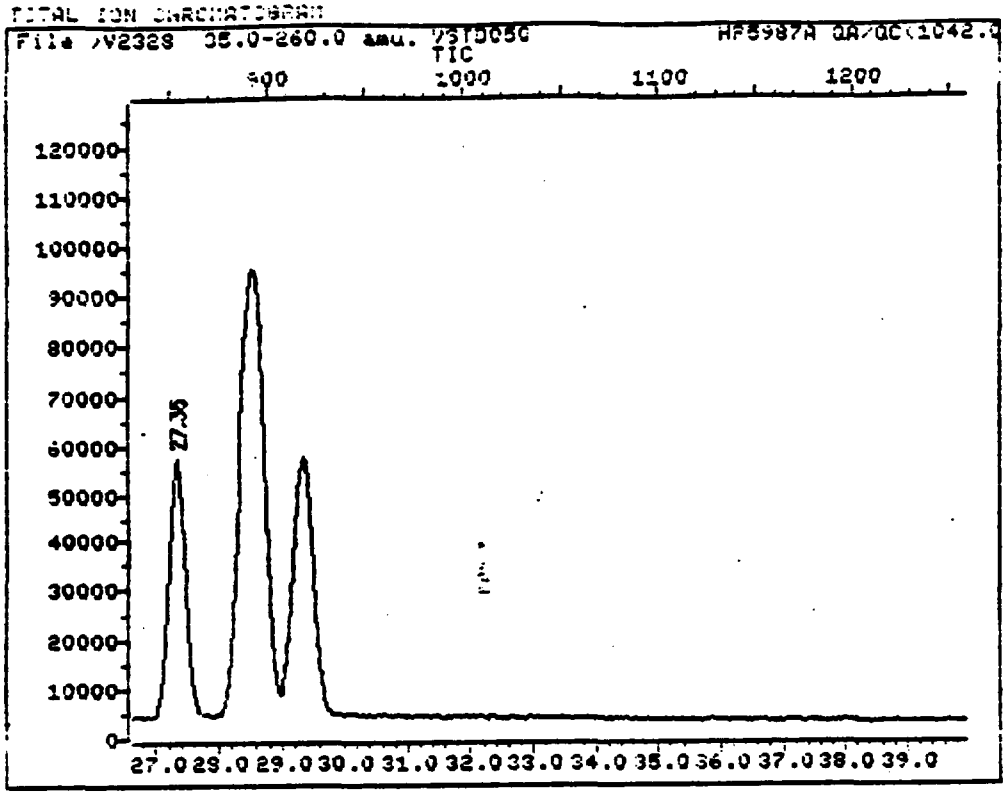


Data File: >V2329::D2 Quant Output File: ^V2328::D1
Name: VSTD050
Misc: HP5987A QA/QC(1042.097.300)P1

Id File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:17

Operator ID: KAREN
Quant Time: 890419 10:18
Injected at: 890419 09:28

TIC page 2 of 3



Data File: >V2328::D2 Quant Output File: ^V2328::D1
Name: VSTD050
Misc: HP5987A QA/QC(1042.097.300)P1

Id File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:17

Operator ID: KAREN
Quant Time: 890419 10:18
Injected at: 890419 09:28

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: CSC Laboratories, Inc. Contract: -

Lab Code: CSCRIN Case No.: - SAS No.: - SDG No.: -

Lab File ID (Standard): V2320 Date Analyzed: 4/10/89

Instrument ID: 67 1 Time Analyzed: 9:19

Matrix: (soil/water) SOIL Level: (low/med) MED Column: (pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	81449.	8.47	373220.	18.64	323725.	23.47
	UPPER LIMIT	162898.		746440.		647450.	
	LOWER LIMIT	40724.		186610.		161863.	
	EPA SAMPLE NO.						
01	VBLK04180I	81322.	8.44	369310.	18.63	330764	23.46
02	I3589	85137.	8.44	378683.	18.63	335601.	23.44
03	I3590	82495.	8.44	389015.	18.63	336240.	23.43
04							
05							
06							
07							
08							
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12							
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14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

VOA

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: QEG Laboratories, Inc. Contract: -

Lab Code: CBRIEN Case No.: - SAS No.: - SDG No.: -

Lab File ID (Standard): V0328 Date Analyzed: 4/19/89

Instrument ID: S7 1 Time Analyzed: 9:26

Matrix: (soil/water) SOIL Level: (low/med) MED Column: (pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	81442.	8.44	381913.	13.64	324379.	23.46
	UPPER LIMIT	162884.		763826.		648758.	
	LOWER LIMIT	40721.		190956.		162189.	
	EPA SAMPLE NO.						
01	V8LK041901	81799.	8.46	376168.	13.65	332144.	23.47
02	I3591BB	81028.	8.44	371528.	13.66	324275.	23.45
03	I3591MS (I3625)	78593.	8.44	363362.	13.66	321416.	23.45
04	I3591MSD (I3626)	80727.	8.48	378883.	13.67	330984.	23.45
05	I3592	79887.	8.47	367040.	13.66	329998.	23.47
06	I3593	81591.	8.47	384418.	13.66	339117.	23.46
07							
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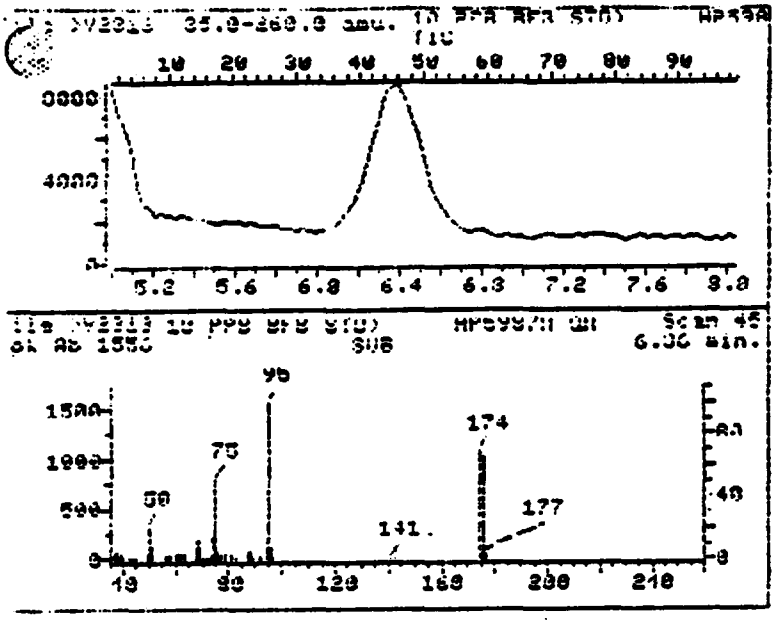
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

Raw QC



[illegible] PERFORMANCE STANDARD

[illegible]fluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.31	20.31	Ok
75	30-60% of mass 95	50.42	50.42	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.13	7.13	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	68.38	68.38	Ok
175	5-9% of mass 174	4.69	6.86	Ok
176	95-101% of mass 174	65.23	95.39	Ok
177	5-9% of mass 176	3.68	5.69	Ok

Injection Date: 04/12/89
Injection Time: 10:54
Data File: >U2313
Scan: 45

513 10 PPB BFB STD) HP5972A QA/QC(1042.097.300)P1
45 SUB

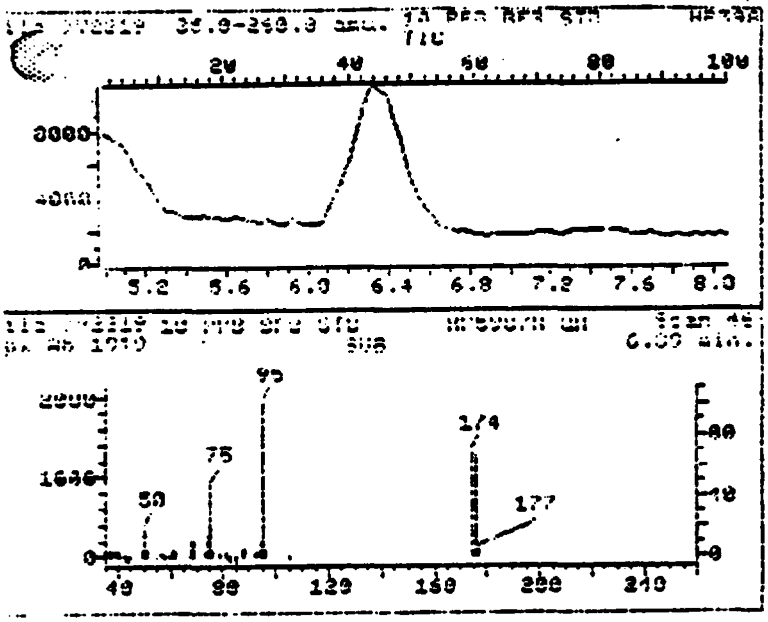
File: >U2313 Scan #: 45 Retn. time: 6.36

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	76.00	50.05	316.00	68.05	177.00	79.05	46.00	95.05	1556.00
38.05	65.00	51.05	126.00	69.05	191.00	81.05	47.00	96.05	111.00
39.05	44.00	56.05	39.00	70.05	9.00	83.05	12.00	97.05	7.00
39.95	1.00	57.20	25.00	72.05	5.00	87.05	85.00	141.15	3.00
41.05	0.00	58.05	24.00	73.05	61.00	88.05	79.00	142.15	2.00
42.05	-8.00	60.05	39.00	74.05	236.00	88.95	10.00	174.00	1064.00
43.05	3.00	61.05	66.00	75.05	783.00	91.05	10.00	175.00	73.00
44.05	-28.00	62.05	55.00	76.05	77.00	92.05	41.00	176.00	1015.00
45.05	9.00	63.05	49.00	77.05	36.00	94.20	164.00	177.00	56.00
49.05	68.00	66.95	-10.00						

MS data file header from : >U2313

Sample: 10 PPB BFB STD) Operator: KAREN MS 4/12/89 10:54
Misc : HP5972A QA/QC(1042.097.300)P1
MS #: 1 MS model: 87 SW/HW rev.: 1A ALS # : 0
Method file: BFBSTD Tuning file: MTB778 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 200 Transfer line temp. : 280

Chromatographic temperatures :	220.	220.	0.	0.	0.
Chromatographic times, min. :	5.0	3.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	.1	0.0	0.0	0.0	0.0



GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.29	18.29	Ok
75	30-60% of mass 95	46.95	46.95	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.20	6.20	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	67.95	67.95	Ok
175	5-9% of mass 174	3.80	5.60	Ok
176	95-101% of mass 174	65.99	97.11	Ok
177	5-9% of mass 176	[illegible]	[illegible]	Ok

Injection Date: [illegible]
Injection Time: 08:36
Data File: >U2319
Scan: 46

006

46 RBB

File: XU2319 Scan #: 46 Retn. time: 6.39

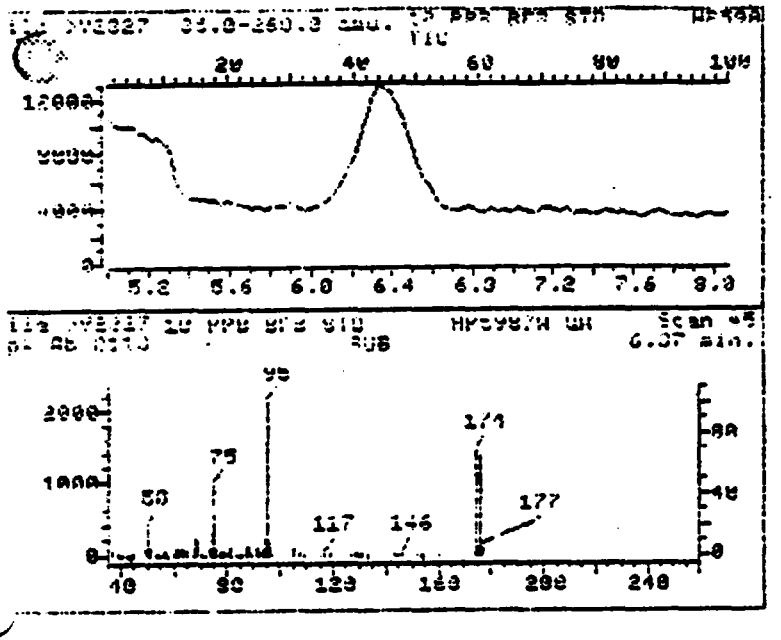
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	68.00	49.05	75.00	61.05	29.00	79.05	43.00	94.05	185.00
38.05	63.00	50.05	351.00	62.05	68.00	81.05	61.00	95.05	1919.00
39.05	50.00	51.05	114.00	67.05	5.00	82.20	-12.00	96.05	119.00
39.95	50.00	55.05	-13.00	68.05	199.00	83.05	-112.00	106.05	-14.00
41.05	-2.00	56.05	23.00	69.05	197.00	85.05	-84.00	124.00	1304.00
42.05	17.00	57.20	48.00	73.20	67.00	87.05	81.00	125.15	23.00
43.05	-39.00	58.05	-12.00	74.05	275.00	88.05	118.00	126.00	1265.00
44.05	-56.00	59.05	-1.00	75.05	901.00	92.05	29.00	177.00	75.00
45.05	22.00	60.05	11.00	76.05	77.00	93.05	56.00		

:AI

>> Data file header from : XU2319

Sample: 10 PPB RFB STD Operator: KAREN MS 4/18/89 8:36
Misc : HP5987A QA/QC(1842,092,300)P1
Sys. #: 1 MS model: 87 SW/HW rev.: 1A ALS # : 0
Method file: RFBSIO Tuning file: MT8218 No. of extra records: 0
Source temp.: 200 Analyzer temp.: 280 Transfer line temp. : 280

Chromatographic temperatures :	220.	220.	0.	0.	0.
Chromatographic times, min. :	5.0	3.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	.1	0.0	0.0	0.0	0.0



(4-Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
[illegible]	[illegible]% of mass 95	17.24	17.24	Ok
[illegible]	30-60% of mass 95	45.18	45.18	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.26	7.26	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	67.49	67.49	Ok
175	5-9% of mass 174	4.59	6.80	Ok
176	95-101% of mass 174	65.36	96.84	Ok
[illegible]	[illegible]% of mass 174	5.87	5.87	Ok

Injection Date: 04/19/94
Injection Time: 08:45
Data File: >V2327
Scan: 45

File: [illegible] Scan #: 45 Retn. time: 6.37

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	48.00	58.05	-34.00	76.05	71.00	92.20	50.00	140.15	-17.00
39.05	11.00	59.95	11.00	77.05	6.00	93.20	74.00	131.15	8.00
40.05	-28.00	61.05	72.00	78.05	35.00	94.05	235.00	133.15	-29.00
41.05	-18.00	62.05	79.00	79.05	36.00	95.20	2213.00	143.15	1.00
42.05	-22.00	63.05	73.00	80.05	7.00	96.20	164.00	144.25	-7.00
43.05	-50.00	64.05	38.00	81.05	98.00	97.20	-4.00	145.15	-21.00
44.05	-100.00	67.05	-2.00	82.05	-29.00	105.20	64.00	146.15	4.00
45.05	9.00	68.05	204.00	83.20	-5.00	107.20	6.00	150.15	-23.00
49.05	20.00	69.05	199.00	84.05	-27.00	109.15	-7.00	153.15	-29.00
50.05	376.00	70.05	15.00	85.05	-29.00	115.15	-16.00	154.15	-91.00
51.05	113.00	71.05	-4.00	86.05	-20.00	117.15	12.00	160.15	-4.00
53.05	-9.00	72.05	-23.00	87.05	122.00	119.15	4.00	174.00	1426.00
54.20	2.00	73.05	62.00	88.05	112.00	127.15	-23.00	175.00	97.00
55.05	-5.00	74.05	291.00	89.05	7.00	128.15	2.00	176.00	1381.00
56.05	53.00	75.05	953.00	91.20	87.00	129.15	3.00	177.00	81.00
57.05	46.00								

Method file loaded from : [illegible]

Sample: [illegible] Operator: KAREN MS 4/19/89 4:45
Data : [illegible]
Acq. #: 1 MS model: 87 HW/HW rev.: 1A ALS # : 0
Method File: [illegible] Tuning File: M13218 No. of extra records: 2
Source temp.: [illegible] Analyzer temp.: 250 Transfer line temp. : 280

Chromatographic temperatures :	220.	220.	0.	0.	0.
Chromatographic times, min. :	5.0	5.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	.1	0.0	0.0	0.0	0.0

.ML

Method Blanks

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLANK

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK04180I

Sample wt/vol: 3.8 (g/mL) G Lab File ID: >V2321

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1300	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	650	
67-64-1	Acetone	1300	
75-15-0	Carbon Disulfide	650	
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform		
107-06-2	1,2-Dichloroethane		
78-93-3	2-Butanone	730	JB
71-55-6	1,1,1-Trichloroethane	650	U
56-23-5	Carbon Tetrachloride	650	
108-05-4	Vinyl Acetate	1300	
75-27-4	Bromodichloromethane	650	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene		
75-25-2	Bromoform		
108-10-1	4-Methyl-2-Pentanone	380	J
591-78-6	2-Hexanone	430	J
127-18-4	Tetrachloroethene	650	U
79-34-5	1,1,2,2-Tetrachloroethane		
108-88-3	Toluene		
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene		
100-42-5	Styrene		
1330-20-7	Xylene (total)		

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: METHOD BLANK

Lab Name: OBG LABORATORIES INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK04180J

Sample wt/vol: 3.8 (g/mL) G Lab File ID: >V2321

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

QUANT REPORT

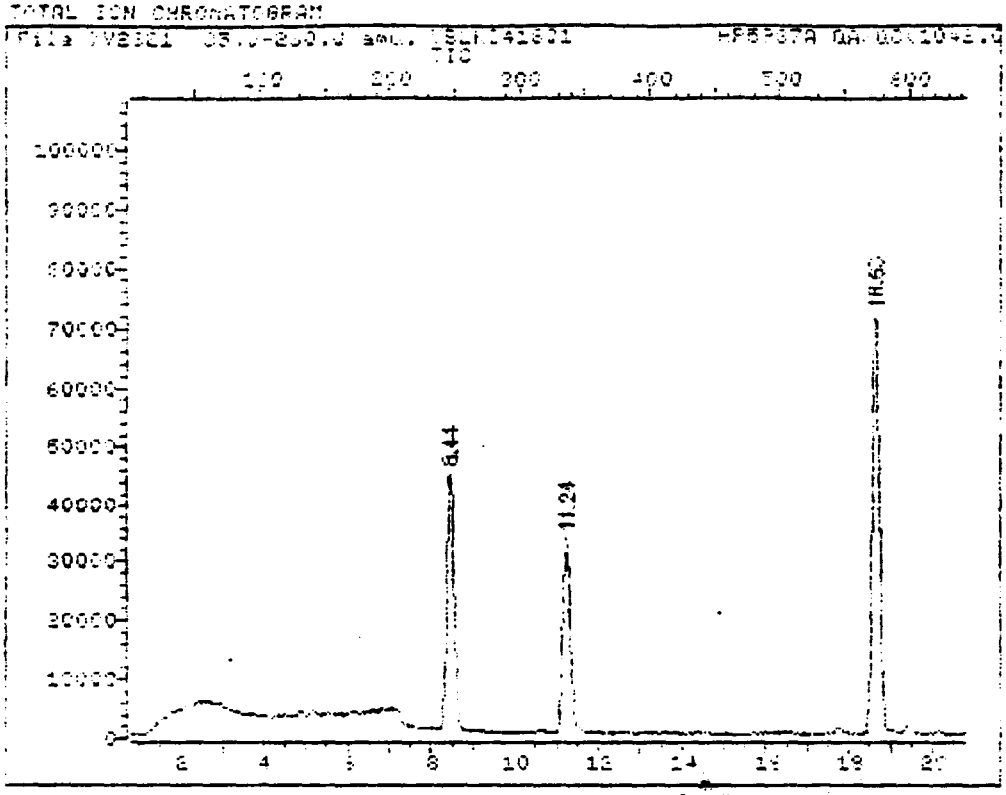
Operator ID: KAREN Quant Rev: 6 Quant Time: 890418 11:32
Output File: ^V2321::D1 Injected at: 890418 10:40
Data File: >V2321::02 Dilution Factor: 1.000000
Name: V8LK041801
Misc: HP5987A QA/QC(1042.097.300)P1

ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.44	128.0	81322M	250.00	NG	99
~~3)~~	~~Methylene Chloride~~	~~7.18~~	~~84.0~~	~~1614~~	~~2.70~~	~~NG~~	~~76~~
~~7)~~	~~Acetone~~	~~9.14~~	~~43.0~~	~~2527M~~	~~1.77~~	~~NG~~	~~91~~
~~9)~~	~~Chloroform~~	~~10.47~~	~~83.0~~	~~2552~~	~~2.90~~	~~NG~~	~~93~~
15)	1,2-Dichloroethane-d4	11.24	65.0	123931	249.44	NG	81
18)	*1,4-Difluorobenzene	18.63	114.0	569510M	250.00	NG	100
29)	2-Butanone	11.36	72.0	1057	23.39	NG	98
~~31)~~	~~Benzene~~	~~12.77~~	~~178.0~~	~~1211~~	~~1.10~~	~~NG~~	~~0~~
32)	*Chlorobenzene-d5	23.46	117.0	550964	250.00	NG	96
33)	4-Methyl-2-pentanone	19.41	43.0	5573M	14.37	NG	97
34)	2-Hexanone	20.95	43.0	5569M	18.33	NG	83
37)	Toluene-d8	22.23	98.0	455473	255.69	NG	100
41)	Bromofluorobenzene	27.33	95.0	218839M	256.81	NG	84

* Compound is ISTD

TOTAL ION CHROMATOGRAM



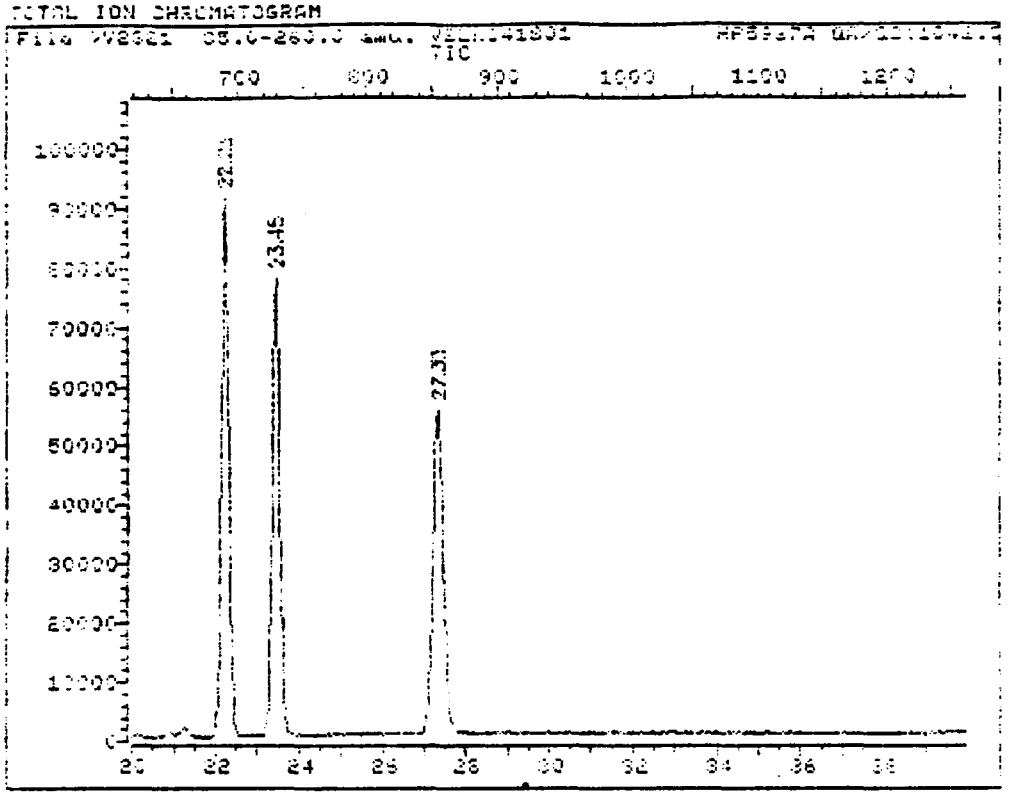
Data File: >V2321::D2 Quant Output File: >V2321::D1
Name: VBLK041801
Desc: HP5987A QA/QC[1042.097.300]P1

In File: CDVHL:*.EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

Operator ID: KAREN
Quant Time: 890418 11:52
Injected at: 890418 10:40

TIC page 1 of 1

TOTAL ION CHROMATOGRAM



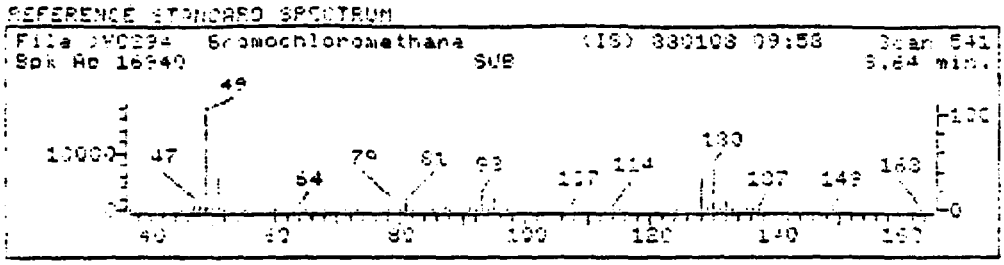
Data File: >V0321::D2 Quant Output File: ^V1F21::D1
Name: VEL1041S01
Misc: HP5987A GA/GC(1042.097.300)F1

Id File: IDVML::E(
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890418 11:29

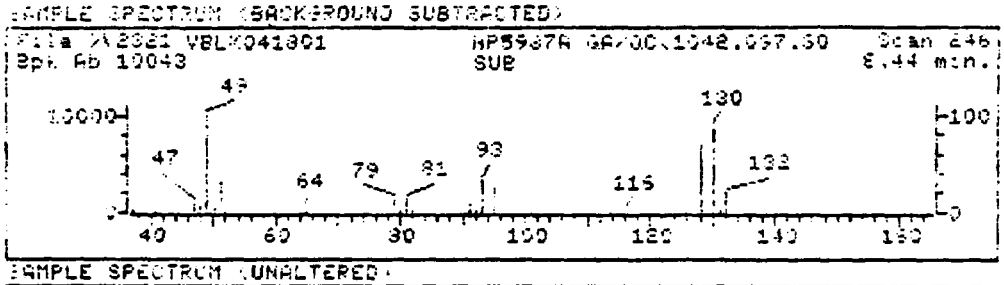
Operator ID: KAREN
Quant Time: 890413 11:31
Injected at: 890413 10:40

TIC page 2 of 2

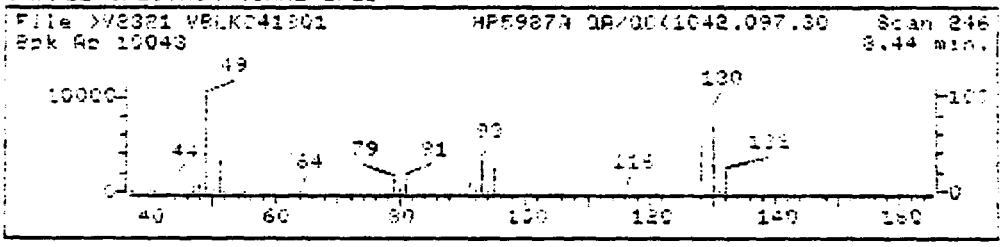
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



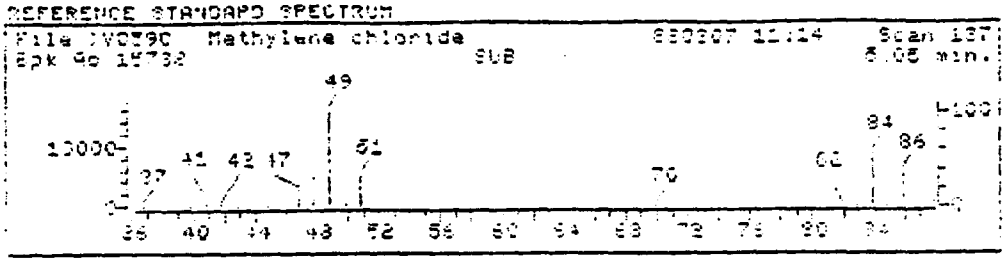
SAMPLE SPECTRUM (UNALTERED)



Data File: >V2321:D2 Quant Output File: >V2321:R1
Name: VBLK041301
Misc: HP5987A QA/QC(1042.097.30)P1
Quant Time: 890418 11:32 Quant ID File: IDVML:EA
Injected at: 890418 10:40 Last Calibration: 890418 11:27

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 246
Retention Time: 8.44 min.
Quant Ion: 128.0
Area: 81322M
Concentration: 250.00 NG
Q-value: 98

REFERENCE STANDARD SPECTRUM



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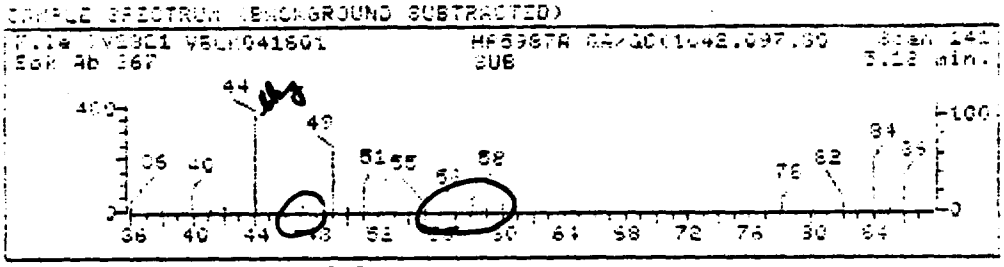

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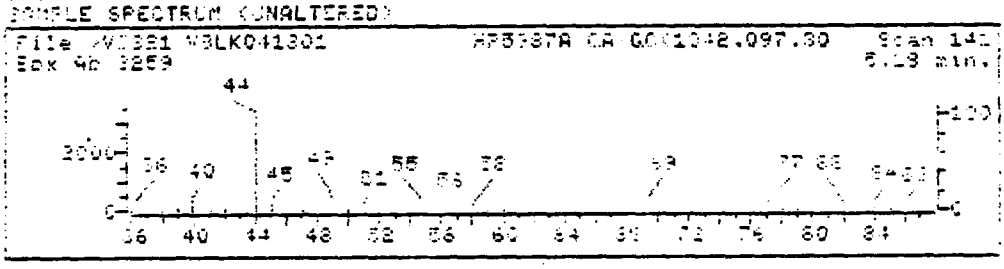
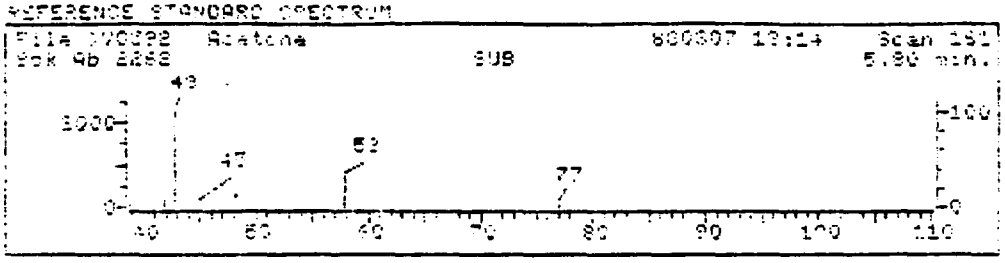


Data File: >V2321::D2 Quant Output File: ^V0321::D1
Name: VBLK041501
Misc: HP5987A GA/GC(1042.097.300)P1
Quant Time: 890419 11:52 Quant ID File: IDUML::EX
Injected at: 890418 10:40 Last Calibration: 890418 11:2

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 141
Retention Time: 5.13 min.
Quant Ion: 84.0
Area: 1906
Concentration: 3.50 NG
r-value: .99

REFERENCE STANDARD SPECTRUM



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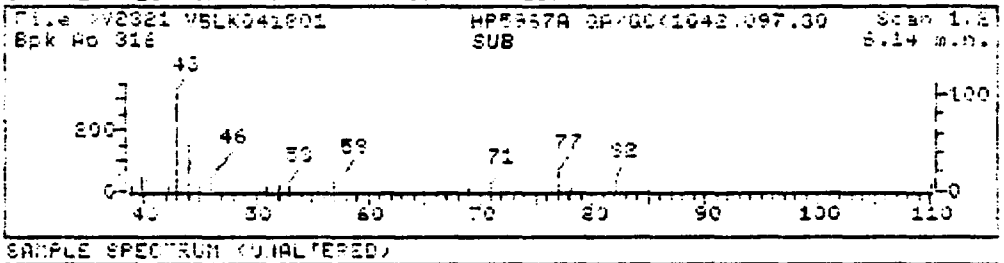
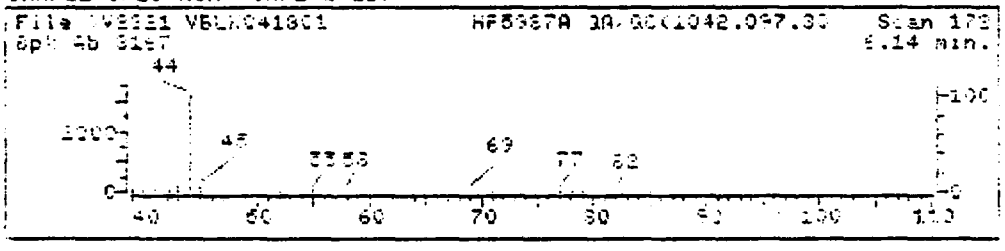


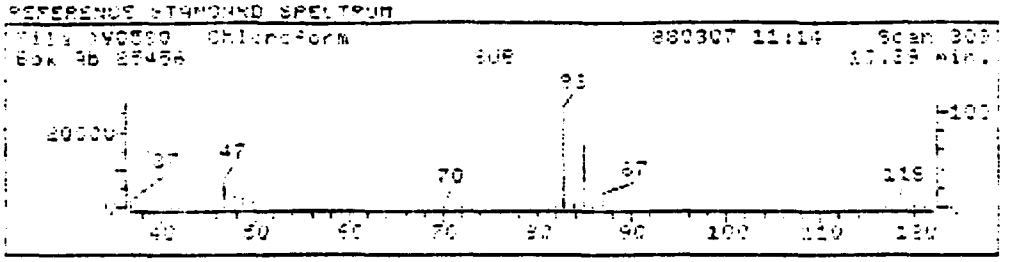
SAMPLE SPECTRUM (UNALTERED)



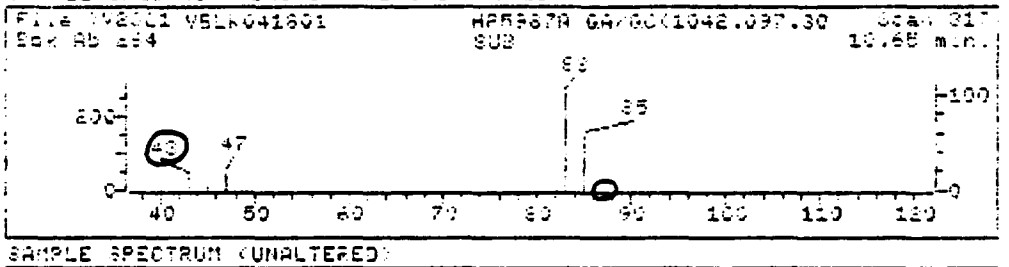
Data File: >V0321:.02 Quant Output File: ^V0321::01
Name: VBLK0..1801
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890418 11:32 Quant ID File: IDVML::FX
Injected at: 890418 10:40 Last Calibration: 890418 11:29

Compound No: 7
Compound Name: Acetone
Scan Number: 173
Retention Time: 6.14 min.
Quant Ion: 43.0
Area: 2917M
Concentration: 14.73 NG
a-value: 75

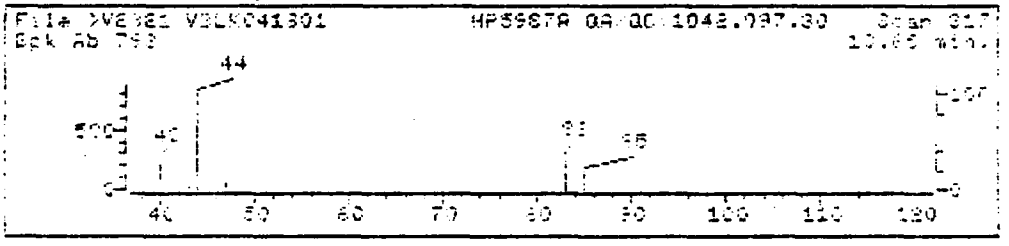
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



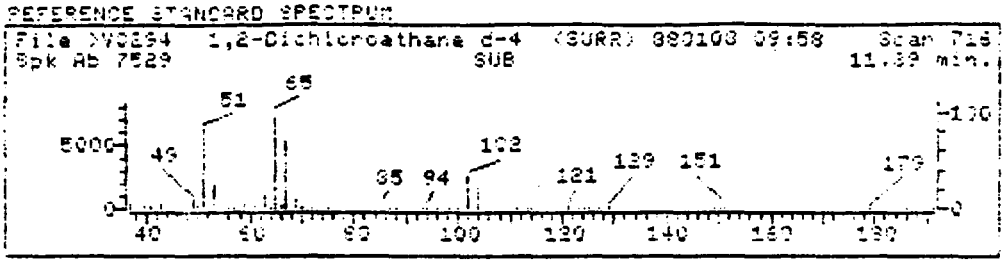
SAMPLE SPECTRUM (UNALTERED)



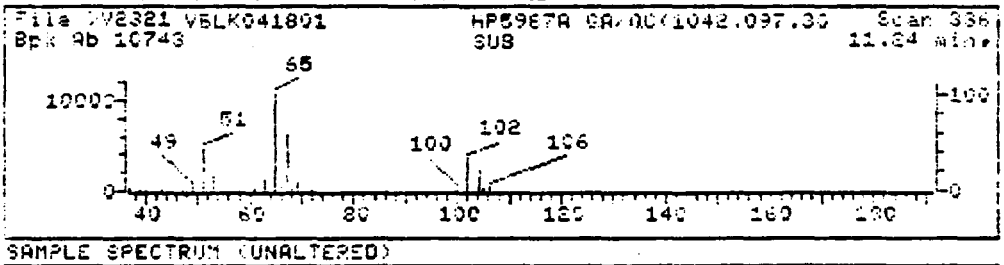
Data File: >V2F21::D2 Quant Output File: ^V2F21::Q1
Name: V0LK041301
Misc: HP5987A GA/GC(1042.097.300)P1
Quant Time: 890418 11:32 Quant ID File: IS\TRL.TXT
Injected at: 890418 10:40 Last Calibration: 890412 11:37

Compound No: 12
Compound Name: Chloroform
Scan Number: 317
Retention Time: 10.65 min.
Quant Ion: 83.0
Area: 2392
Concentration: 2.50 NG
qvalue: 90

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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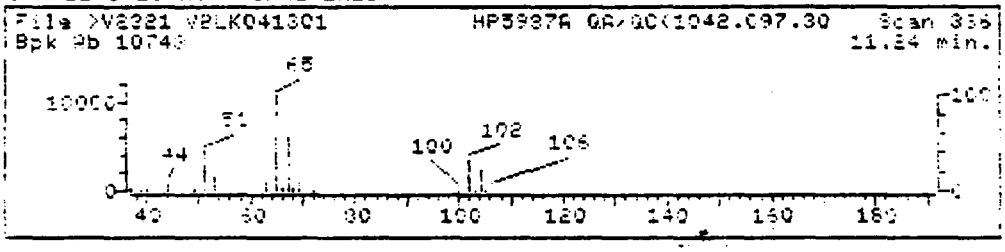
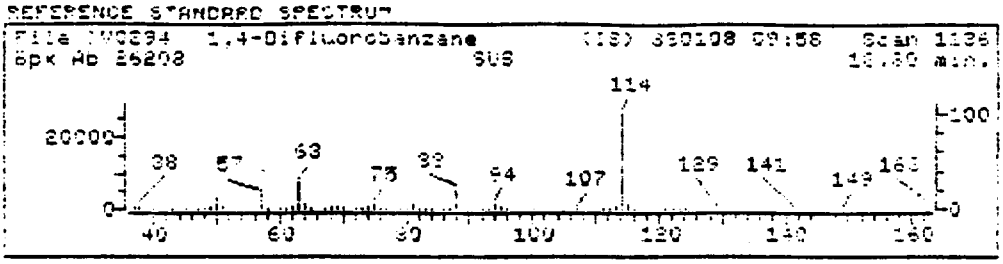


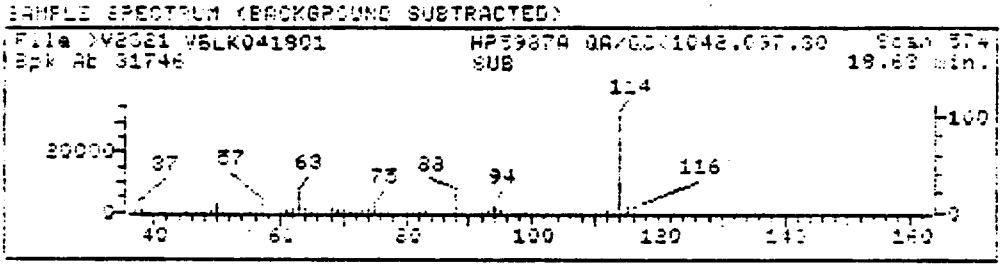
Data File: >V2321::D2 Quant Output File: ^V2321::D1
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)F1
Quant Time: 890418 11:52 Quant ID File: IDUML::EA
Injected at: 890418 10:40 Last Calibration: 890418 11:29

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 336
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 123931
Concentration: 249.44 NG
q-value: 85

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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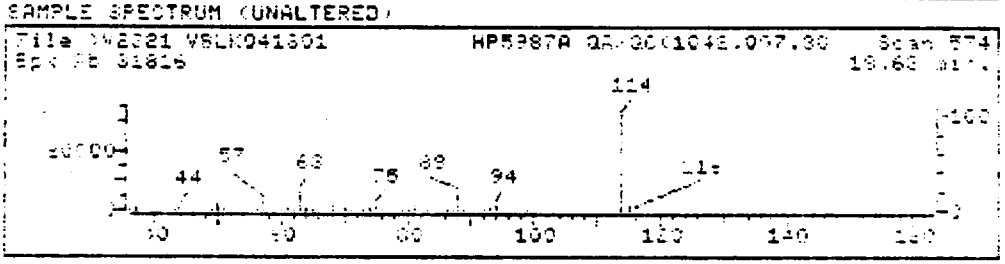
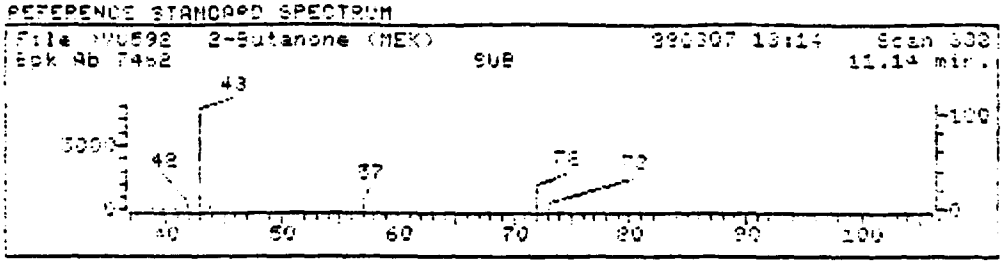


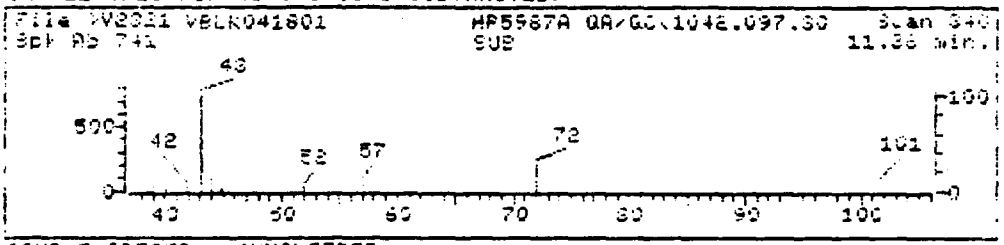
Data File: >V2321::D2 Quant Output File: ^V2321::D1
Name: VSLK041801
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890413 11:52 Quant ID File: IDVSL::SV
Injected at: 890412 10:40 Last Calibration: 890413 11:27

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 574
Retention Time: 18.63 min.
Quant Ion: 114.0
Area: 3693.0M
Concentration: 250.00 NG
q-value: 100

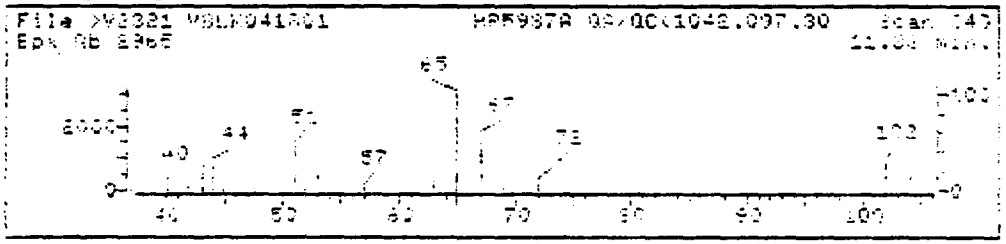
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



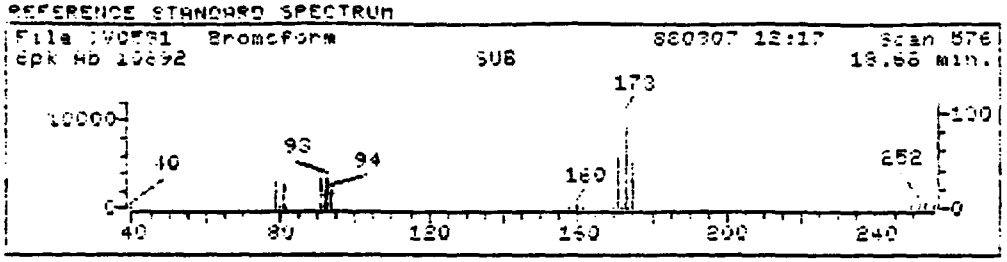
SAMPLE SPECTRUM (UNALTERED)



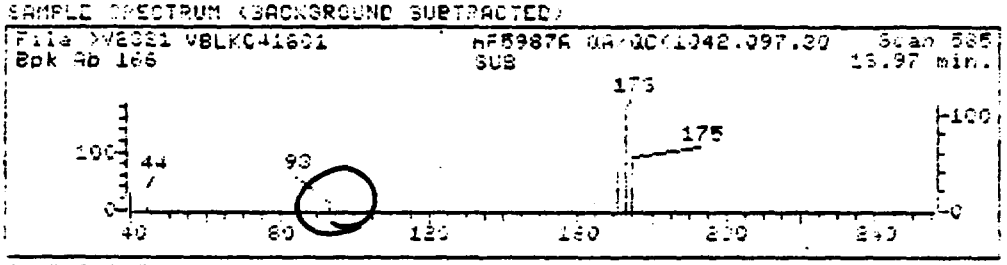
Data File: >V2321::D2 Quant Output File: ^V2321::D1
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)F1
Quant Time: 8?04-18 11:32 Quant ID File: ?QMS::?
Injected at: 8?04-18 10:40 Last Calibration: 8?0418 11:2?

Compound Nr: 1?
Compound Name: 2-Butanone
Scan Number: 340
Retention Time: 11.36 min.
Quant Ion: 72.0
Area: 1453
Concentration: 28.39 NG
q-value: ?8

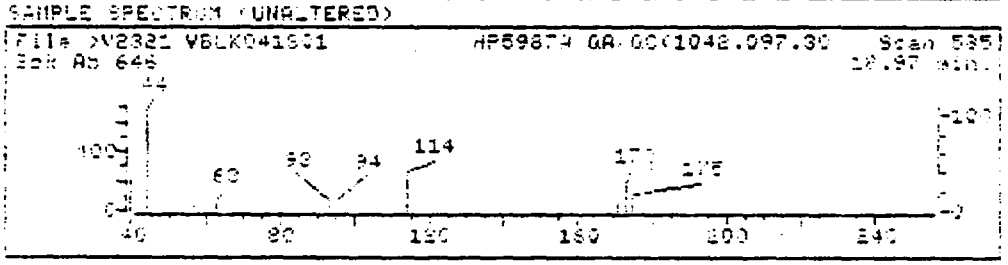
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



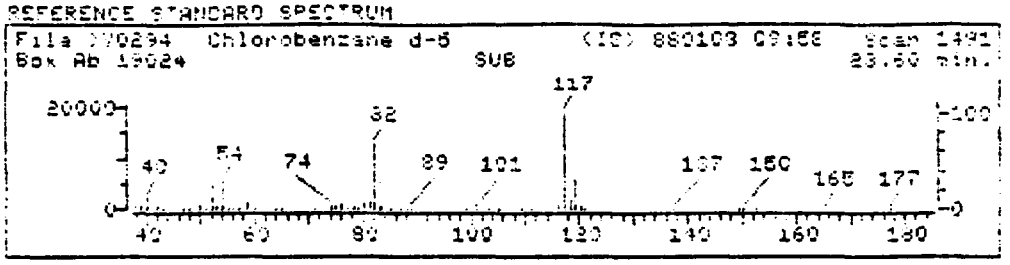
SAMPLE SPECTRUM (UNALTERED)



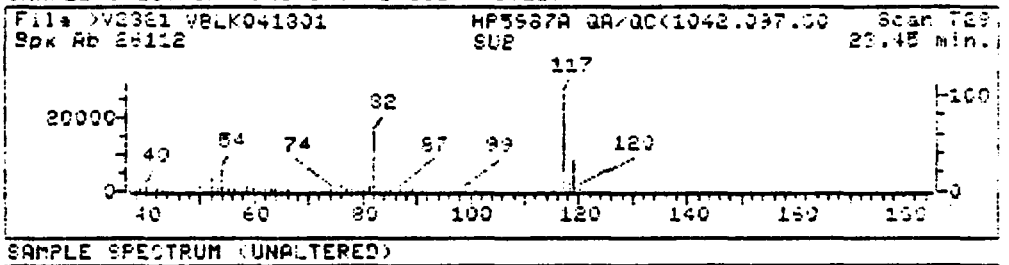
Data File: >V2321::D2 Quant Output File: >V2321::D1
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890418 11:52 Quant ID File: IDMAR.QM
Injected at: 890418 10:40 Last Calibration: 890418 11:2

Compound No: 31
Compound Name: Bromoform
Scan Number: 585
Retention Time: 18.97 min.
Quant Ion: 172.8
Area: 1833
Concentration: 4.16 NG
q-value: 92

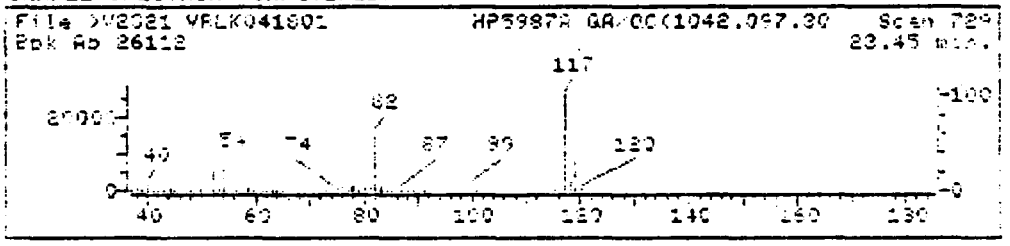
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



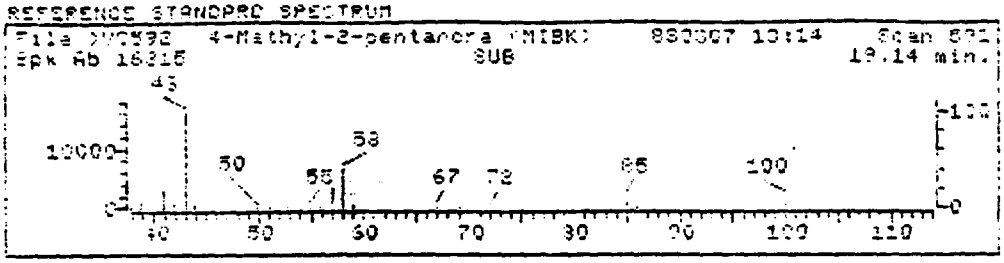
SAMPLE SPECTRUM (UNALTERED)



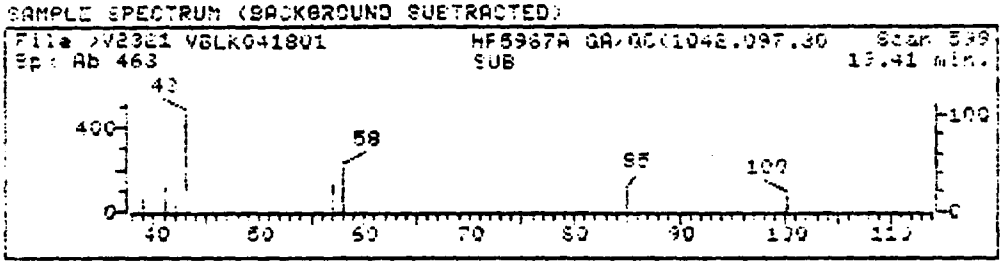
Data File: >V2321::D2 Quant Output File: ^V2321::01
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890418 11:32 Quant ID File: IUTBL:*SX
Injected at: 890418 10:40 Last Calibration: 890418 11:2

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 350964
Concentration: 250.00 NG
q-value: 96

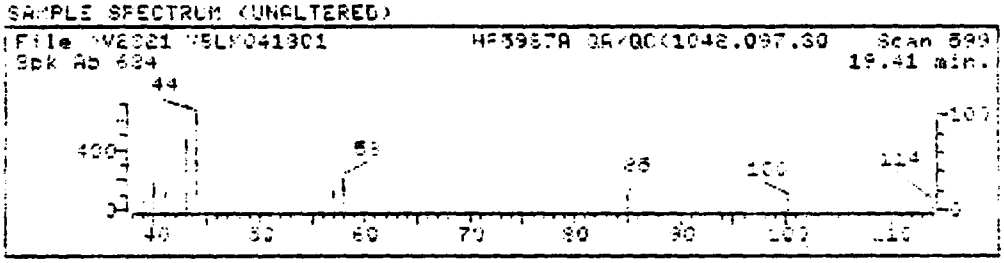
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



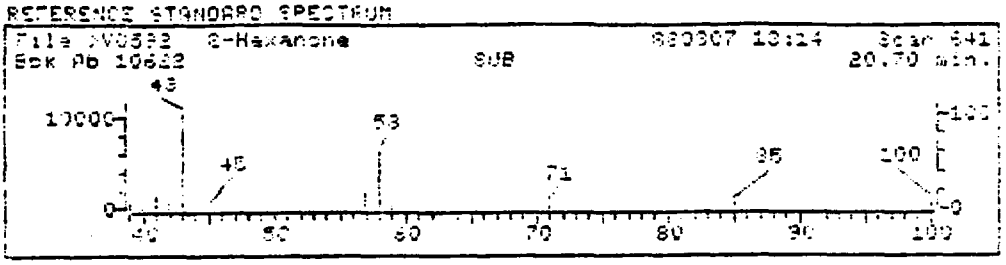
SAMPLE SPECTRUM (UNALTERED)



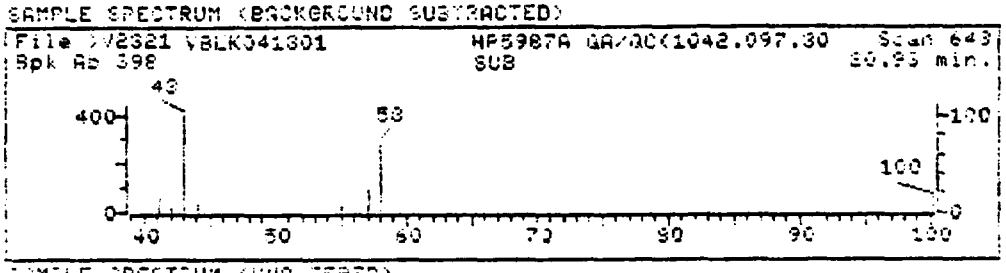
Data File: >V2321::D2 Quant Output File: ^V2321::D1
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890418 11:32 Quant ID File: IDVMI::D1
Injected at: 890418 10:40 Last Calibration: 890418 11:21

Compound No: 33
Compound Name: 4-Methyl-2-pentanone
Scan Number: 599
Retention Time: 19.41 min.
Quant Ion: 43.0
Area: 5573M
Concentration: 14.37 NG
q-value: 85

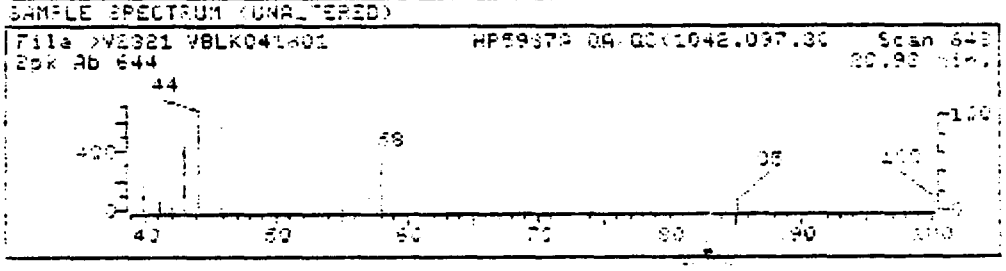
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



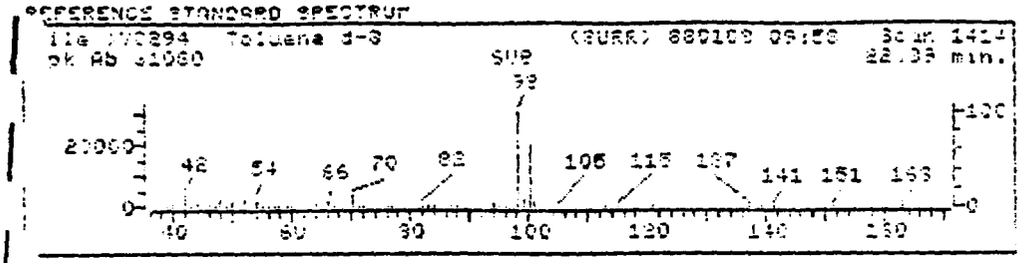
SAMPLE SPECTRUM (UNALTERED)



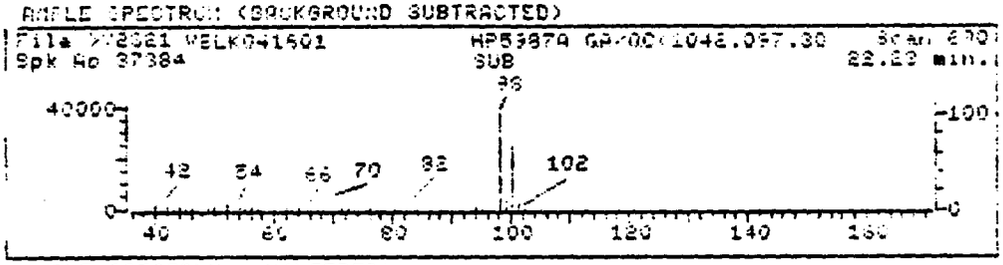
Data File: >V0321::D2 Quant Output File: >V0321::D1
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.300)21
Quant Time: 890418 11:32 Quant ID File: ID0NL::E
Injected at: 890418 10:40 Last Calibration: 890418 11:1

Compound No: 34
Compound Name: 2-Hexanone
Scan Number: 648
Retention Time: 20.93 min.
Quant Ion: 43.0
Area: 5569M
Concentration: 18.59 NG
q-value: 85

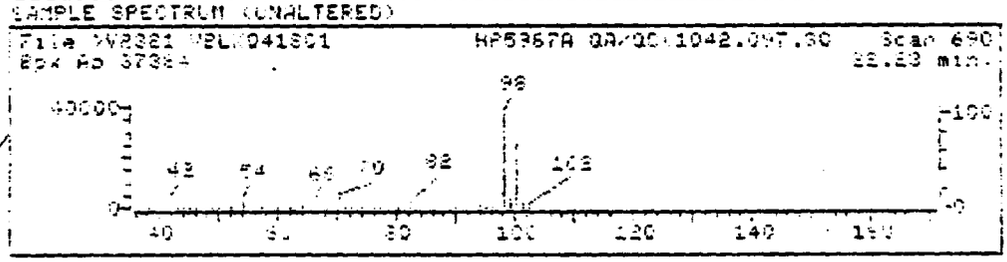
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



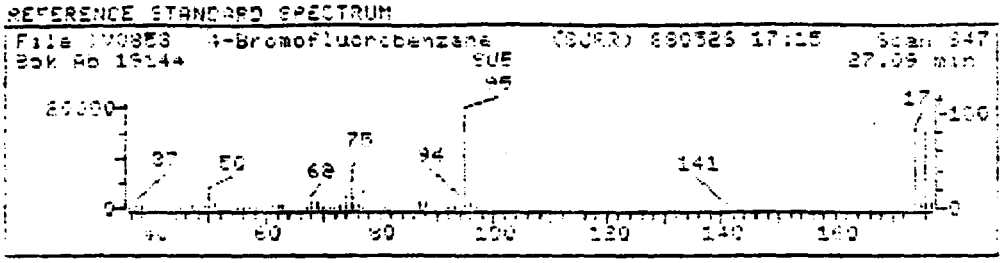
SAMPLE SPECTRUM (UNALTERED)



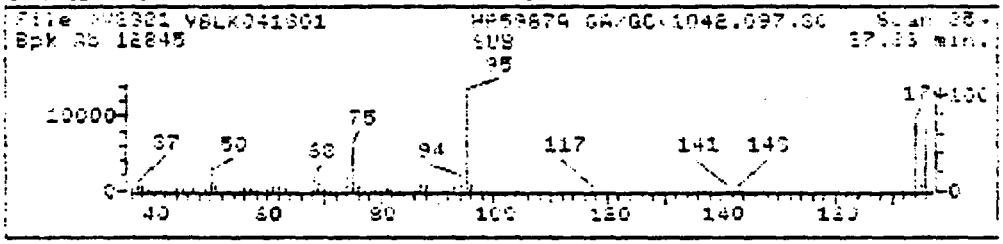
Data File: :V2321::02 Quant Output File: ^V2321::D1
Name: WBLK041801
Misc: HP5987A QA/QC,1042.097.300,P1
Quant Time: 890418 11:52 Quant ID File: IDWBL::EP
Injected at: 890418 10:40 Last Calibration: 890418 11:2[illegible]

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.23 min.
Quant Ion: 98.0
Area: 453473
Concentration: 255.60 NG
q-value: 100

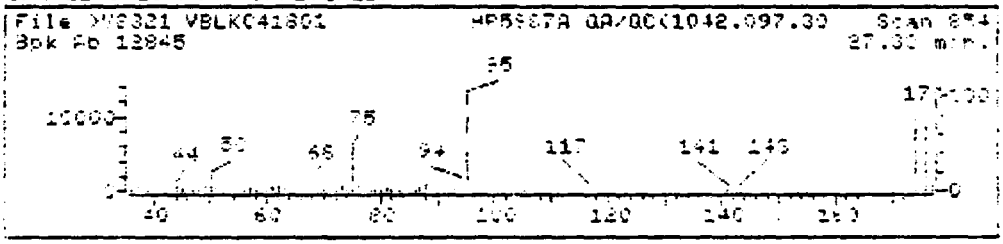
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >VE321::D2 Quant Output File: >VE321::D2
Name: VBLK041801
Misc: HP5987A QA/QC(1042.097.30):P1
Quant Time: 890418 11:51 Quant ID File: 8904[illegible].ID
Injected at: 890418 10:40 Last Calibration: 890418 11:2[illegible]

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 854
Retention Time: 27.53 min.
Quant Ion: 95.0
Area: 216639M
Concentration: 156.81 NG
q-value: 94

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLANK

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK04190I

Sample wt/vol: 3.9 (g/mL) G Lab File ID: >V2329

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	1300	U
74-83-9	Bromomethane		
75-01-4	Vinyl Chloride		
75-00-3	Chloroethane		
75-09-2	Methylene Chloride	630	
67-64-1	Acetone	1300	
75-15-0	Carbon Disulfide	630	
75-35-4	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)		
67-66-3	Chloroform		
107-06-2	1,2-Dichloroethane		
78-93-3	2-Butanone	1300	
71-55-6	1,1,1-Trichloroethane	630	
56-23-5	Carbon Tetrachloride	630	
108-05-4	Vinyl Acetate	1300	
75-27-4	Bromodichloromethane	630	
78-87-5	1,2-Dichloropropane		
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane		
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene		
75-25-2	Bromoform		
108-10-1	4-Methyl-2-Pentanone	1300	
591-78-6	2-Hexanone	1300	
127-18-4	Tetrachloroethene	630	
79-34-5	1,1,2,2-Tetrachloroethane		
108-88-3	Toluene		
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene		
100-42-5	Styrene		
1330-20-7	Xylene (total)		

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

METHOD BLANK

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBLK041901

Sample wt/vol: 3.9 (g/mL) G Lab File ID: >V2329

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 11:33
Output File: >V2329::D1 Injected at: 890419 10:2[illegible]
Data File: >V2329::D2 Dilution Factor: 1.00000
Name: VBLK041901
Misc: H959879 QA/QC(1042.097.300)P1

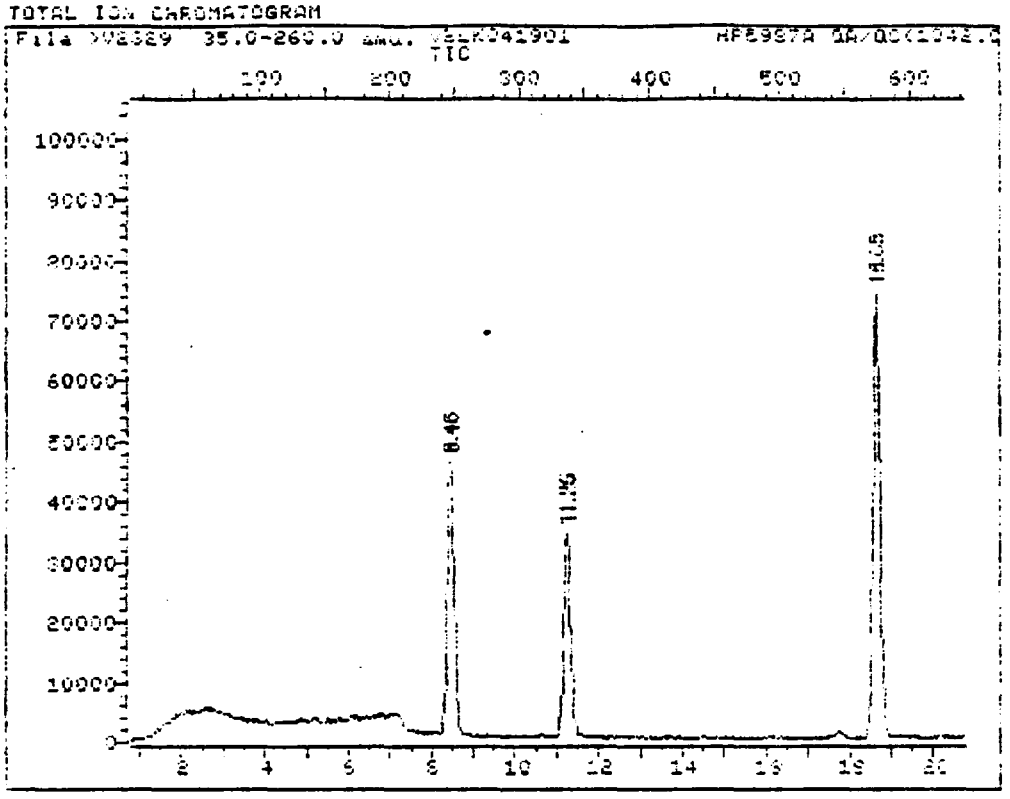
ID File: IDVHL::EA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	8.46	128.0	81799	250.00	NG	97
~~7)~~	~~Tetra-d~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~NG~~	~~[illegible]~~
15)	1,2-Dichloroethane-d4	11.25	65.0	124276	257.08	NG	84
18)	*1,4-Difluorobenzene	18.65	114.0	376168M	250.00	NG	100
32)	*Chlorobenzene-d5	23.43	117.0	352144M	250.00	NG	97
37)	Toluene-d8	22.22	98.0	447792	259.66	NG	100
41)	Bromofluorobenzene	27.35	95.0	217576M	259.37	NG	81

* Compound is ICTD

[illegible]0

TOTAL ION CHROMATOGRAM



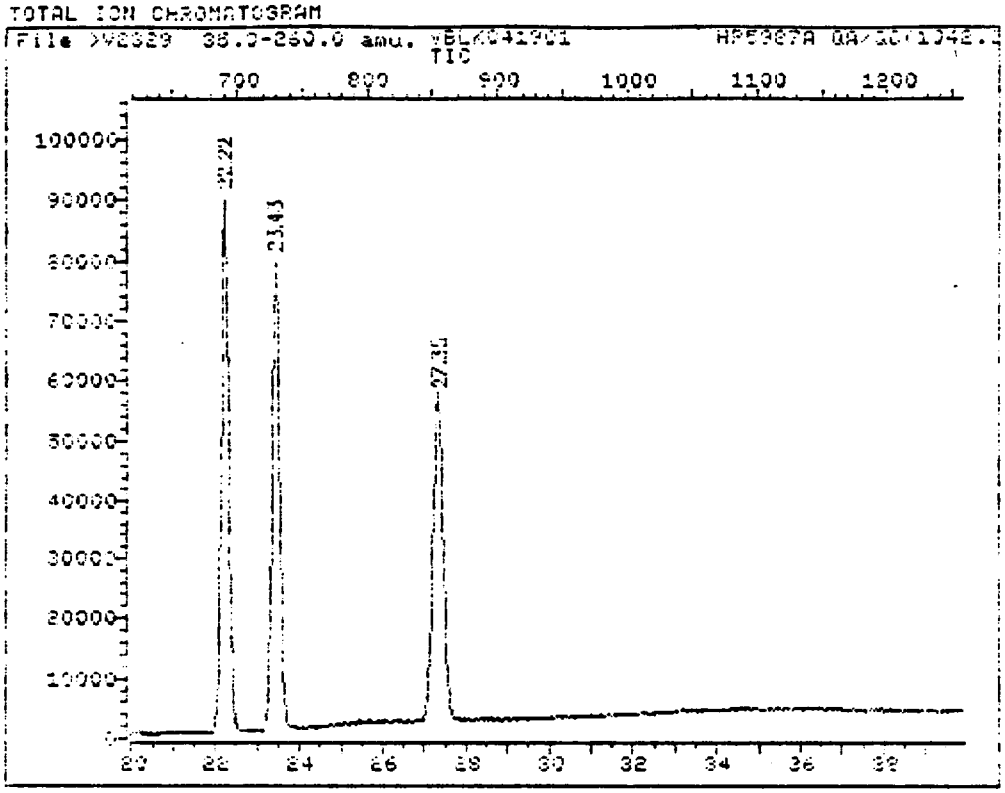
Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1

Id File: IDVML::EY
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 11:22
Injected at: 890419 10:29

TIC page 1 of 2

TOTAL ION CHROMATOGRAM

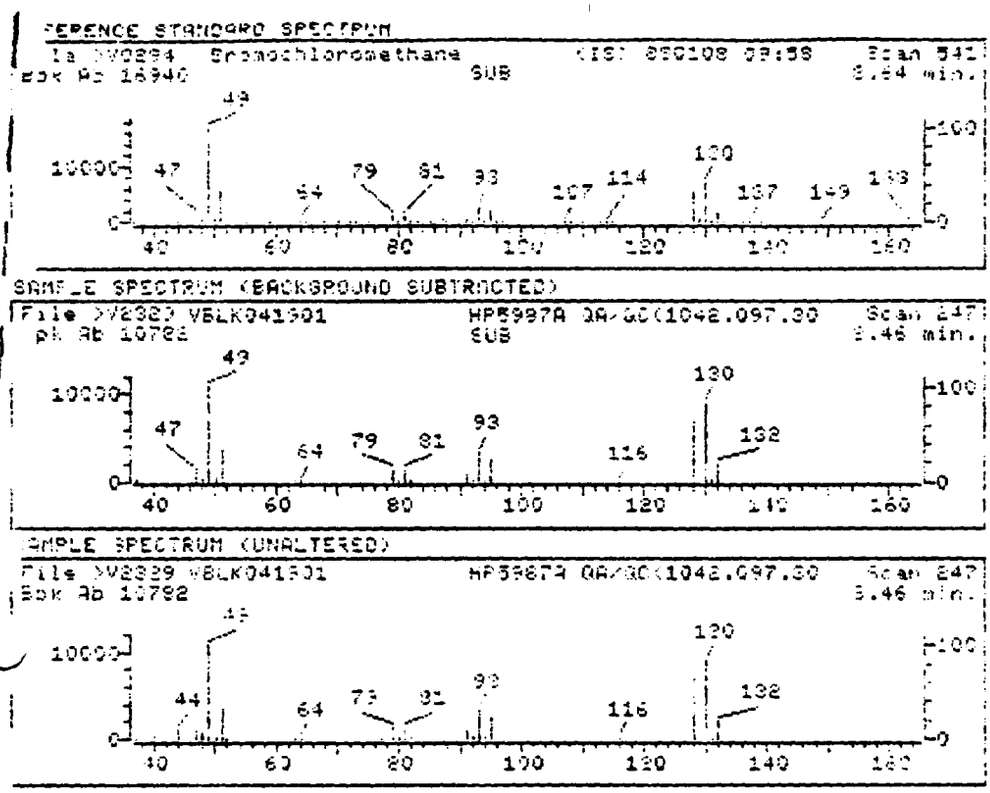


Data File: >V2529::D2 Quant Output File: ^V2529::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)*1

Id File: ILVML::EA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 11:22
Injected at: 890419 10:29

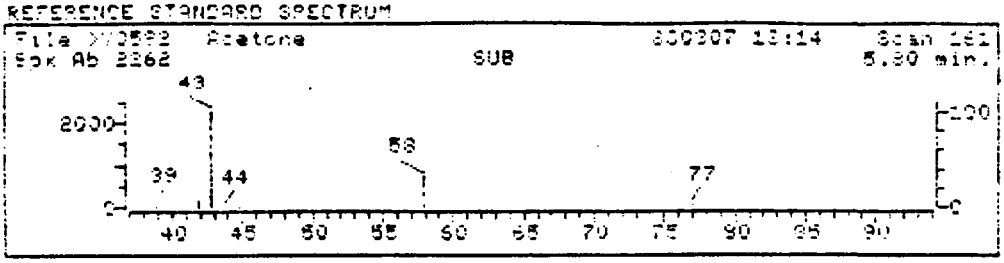
TIC page 2 of 2



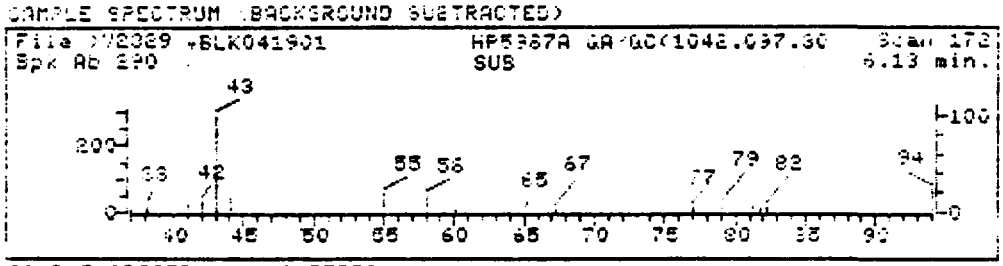
Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041501
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: IDUML::EX
Injected at: 890419 10:29 Last Calibration: 890419 10:58

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 247
Retention Time: 8.46 min.
Quant Ion: 128.0
Area: 81799
Concentration: 250.00 NG
q-value: 97

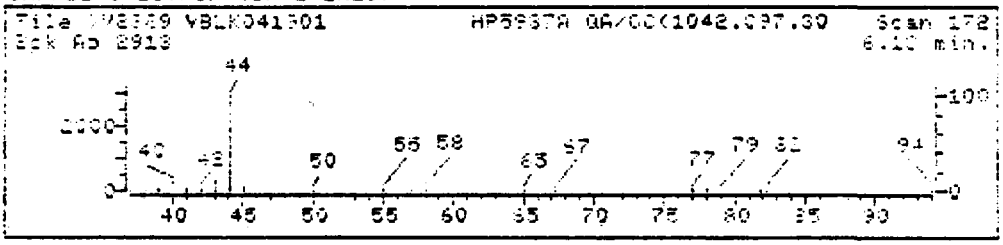
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



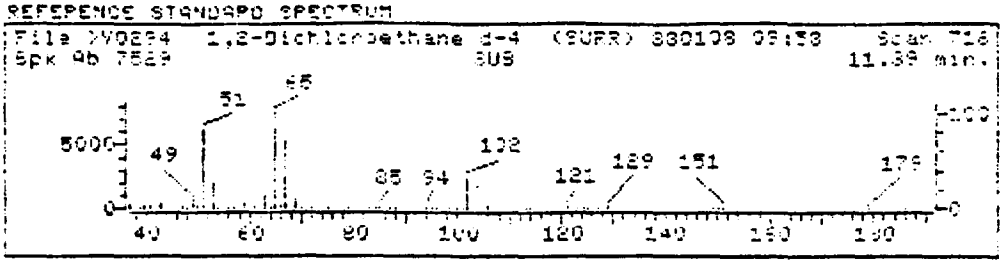
SAMPLE SPECTRUM (UNALTERED)



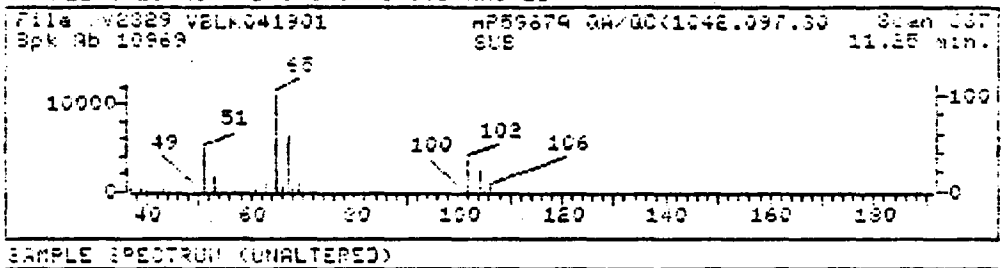
Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: IDVML::EX
Injected at: 890419 10:29 Last Calibration: 890419 10:00

Compound No: 7
Compound Name: Acetone
Scan Number: 172
Retention Time: 6.13 min.
Quant Ion: 43.0
Area: 2929M
Concentration: 18.95 NG
Q-value: 70

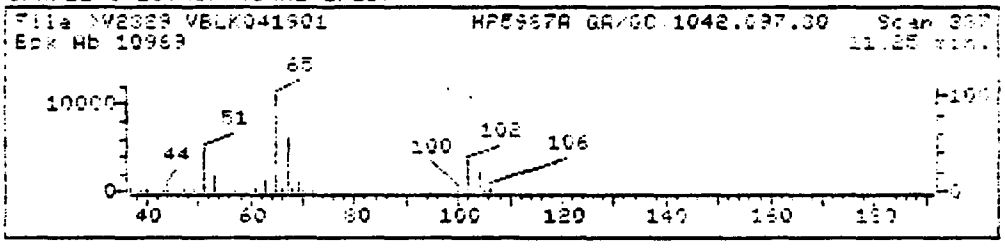
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



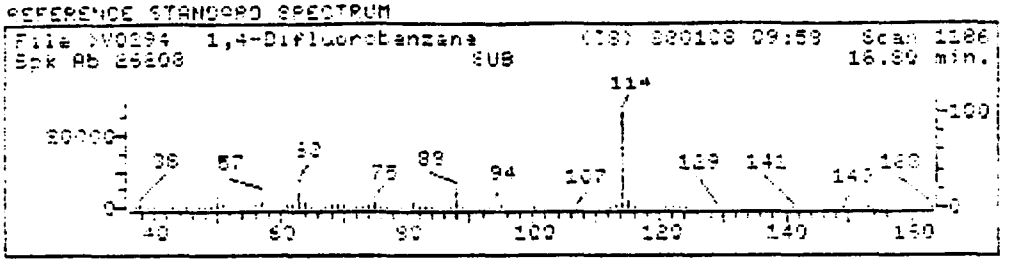
SAMPLE SPECTRUM (UNALTERED)



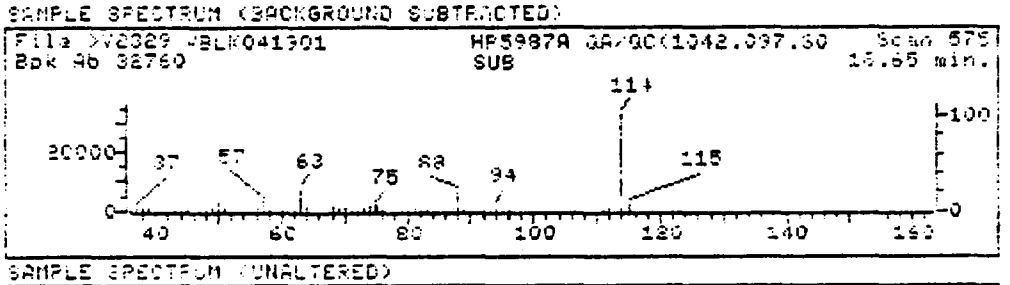
Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: IDVML::D1
Injected at: 890419 10:29 Last Calibration: 890419 10:00

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 337
Retention Time: 11.25 min.
Quant Ion: 65.0
Area: 124276
Concentration: 257.08 NG
q-value: 84

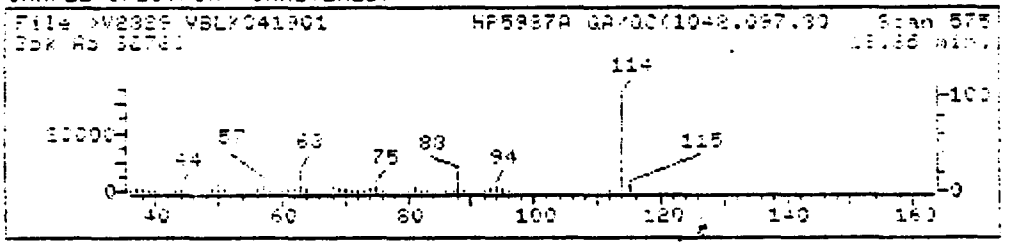
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



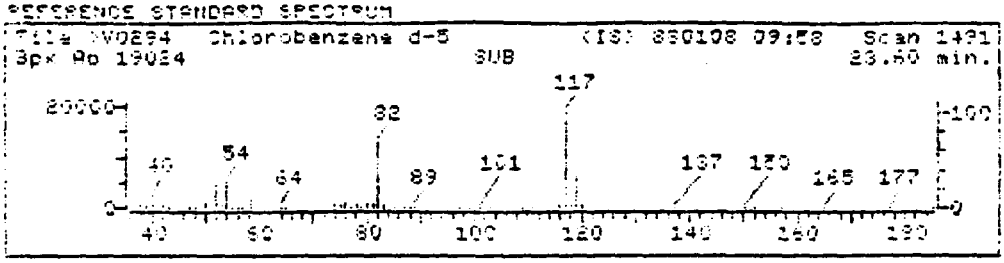
SAMPLE SPECTRUM (UNALTERED)



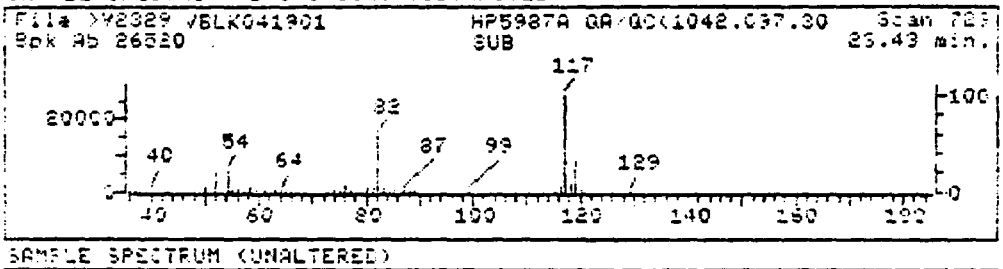
Data File: >V2329::02 Quant Output File: `V2329::01
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.30)P1
Quant Time: 890419 11:22 Quant ID File: 10VML::ES
Injected at: 890419 10:29 Last Calibration: 890419 10:56

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 575
Retention Time: 18.85 min.
Quant Ion: 114.0
Area: 376168M
Concentration: 250.00 NG
q-value: 100

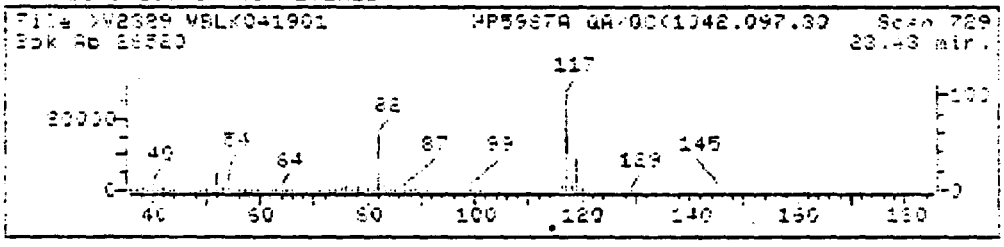
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



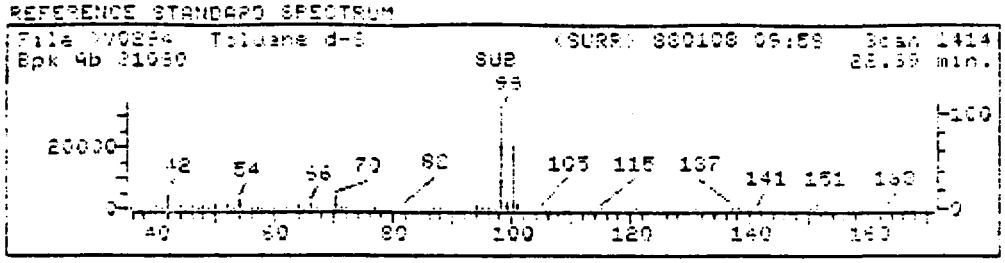
SAMPLE SPECTRUM (UNALTERED)



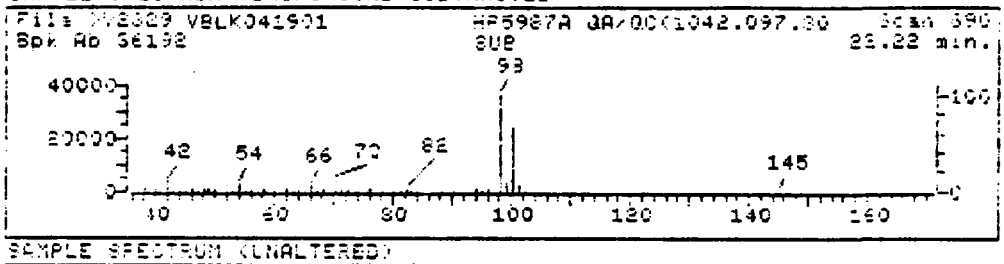
Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: I3VM1::E1
Injected at: 890419 10:29 Last Calibration: 890419 10:5E

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.43 min.
Quant Ion: 117.0
Area: 332144M
Concentration: 250.00 NG
q-value: 97

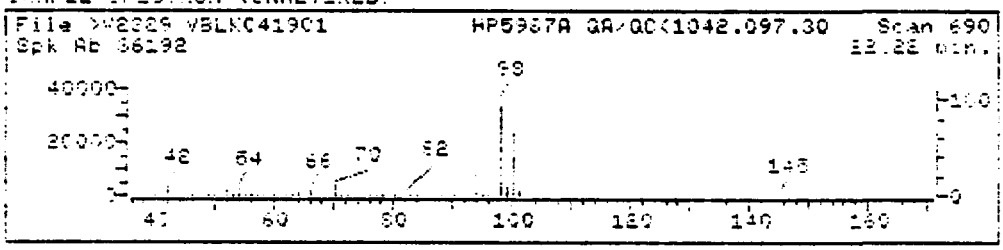
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



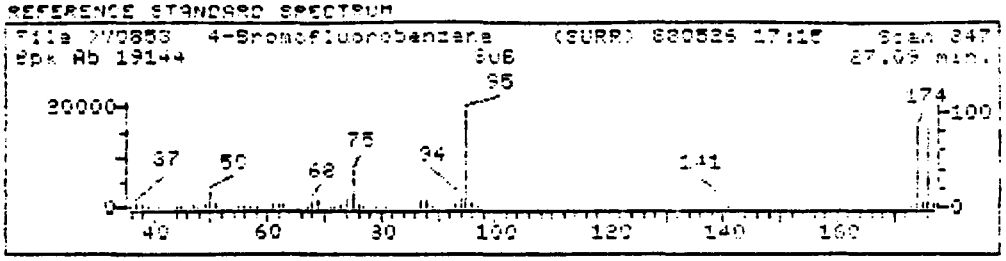
SAMPLE SPECTRUM (UNALTERED)



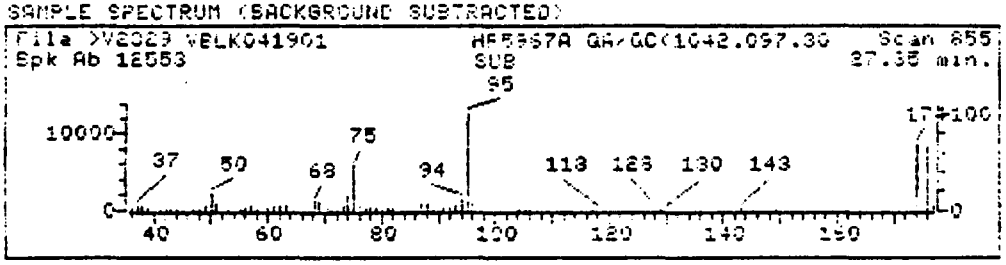
Data File: >V2329::02 Quant Output File: ^V2329::01
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: IDVML::5%
Injected at: 890419 10:29 Last Calibration: 890419 10:59

Compound No: 57
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.22 min.
Quant Ion: 98.0
Area: 447792
Concentration: 259.66 NG
q-value: 100

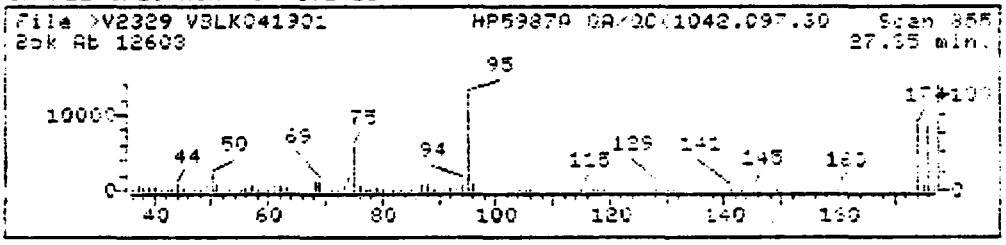
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >V2329::D2 Quant Output File: ^V2329::D1
Name: VBLK041901
Misc: HP5987A QA/QC(1042.097.300)P1
Quant Time: 890419 11:22 Quant ID File: IDUML::E>
Injected at: 890419 10:29 Last Calibration: 890419 10:59

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 855
Retention Time: 27.35 min.
Quant Ion: 95.0
Area: 217574M
Concentration: 259.57 NG
q-value: 82

Matrix Spike

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TP4 – Matrix Test pit Spike Sub Sample

Lab Name: OBG LABORATORIES, INC. Contract: 3435.001.100

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: I3591MS = I3625

Sample wt/vol: 4.0 (g/mL) G Lab File ID: >V2331

Level: (low/med) MED Date Received: 04/14/89

% Moisture: not dec. 49 Date Analyzed: 04/19/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	2500	U
74-83-9	Bromomethane	2500	U
75-01-4	Vinyl Chloride	540	J
75-00-3	Chloroethane	2500	U
75-09-2	Methylene Chloride	1200	U
67-64-1	Acetone	3500	U
75-15-0	Carbon Disulfide	1200	U
75-35-4	1,1-Dichloroethene	1200	U
75-34-3	1,1-Dichloroethane		
540-59-0	1,2-Dichloroethene (total)	430	J
67-66-3	Chloroform	220	J
107-06-2	1,2-Dichloroethane	1200	U
78-93-3	2-Butanone	890	J
71-55-6	1,1,1-Trichloroethane	1200	U
56-23-5	Carbon Tetrachloride	1200	U
108-05-4	Vinyl Acetate	3500	U
75-27-4	Bromodichloromethane	1200	U
78-87-5	1,2-Dichloropropane	1200	U
10061-01-5	cis-1,3-Dichloropropene	1200	U
79-01-6	Trichloroethene		
124-48-1	Dibromochloromethane	1200	U
79-00-5	1,1,2-Trichloroethane	1200	U
71-43-2	Benzene		
10061-02-6	trans-1,3-Dichloropropene	1200	U
75-25-2	Bromoform	1200	U
108-10-1	4-Methyl-2-Pentanone	2500	U
591-78-6	2-Hexanone	2500	U
127-18-4	Tetrachloroethene	1000	J
79-34-5	1,1,2,2-Tetrachloroethane	1200	U
108-88-3	Toluene		
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene	1200	U
100-42-5	Styrene	1200	U
1330-20-7	Xylene (total)	370	J

QUANT REPORT

Operator ID: KAREN Quant Rev: 6 Quant Time: 890419 13:45
Output File: ^V2331::D1 Injected at: 890419 13:00
Data File: >V2331::D2 Dilution Factor: 1.000000
Name: I3591MS
Misc: HP5987A 03RIZ(3435.001.100)91

ID File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

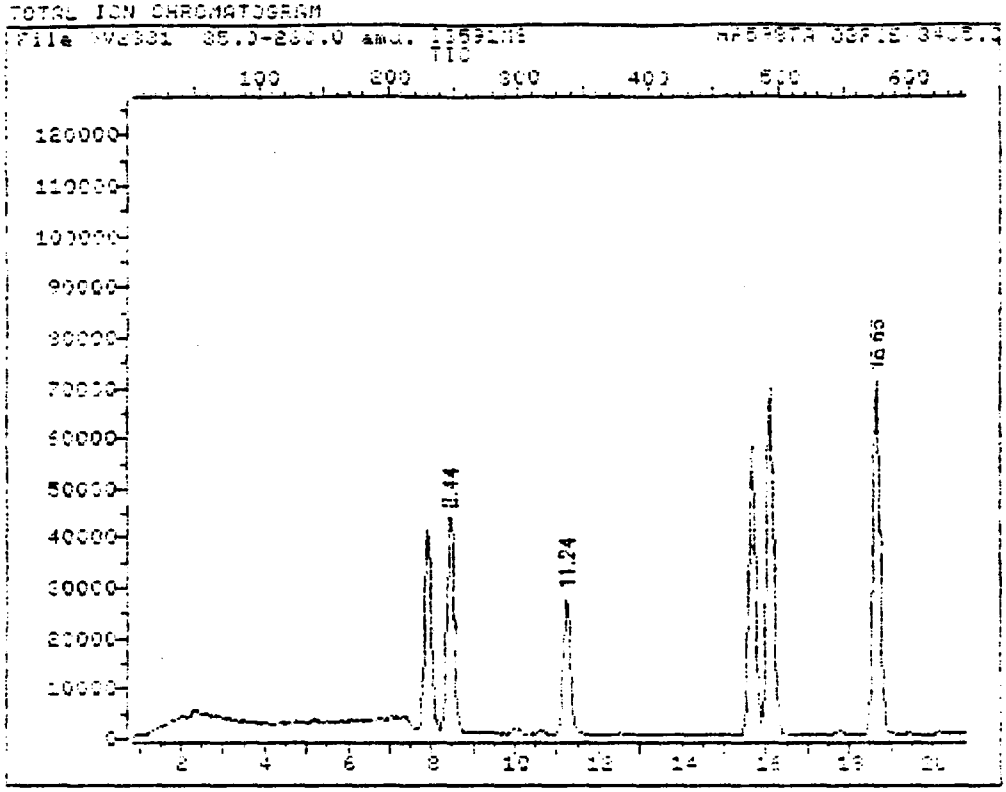
	Compound	R.T.	Q Ion	Area	Conc	Units	%
1)	*Bromochloromethane	8.44	128.0	78593	250.00	NG	99
4)	Vinyl Chloride	2.32	62.0	5503M	11.00	NG	[illegible]
5)	~~Chloroethane~~	~~2.32~~	~~64.0~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
6)	~~Methylene Chloride~~	~~5.21~~	~~84.0~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
7)	~~Acetone~~	~~6.14~~	~~43.0~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
8)	1,1-Dichloroethene	7.91	96.0	105223	254.60	NG	93
12)	1,2-Dichloroethene (total)	10.05	96.0	4195	8.72	NG	99
13)	Chloroform	10.64	83.0	7859	4.50	NG	97
15)	1,2-Dichloroethane-d4	11.24	65.0	99932	213.11	NG	95
18)	*1,4-Difluorobenzene	18.66	114.0	363360	250.00	NG	100
19)	2-Butanone	11.39	72.0	1070	18.09	NG	96
20)	Trichloroethene	15.68	130.0	126158	256.85	NG	92
21)	Benzene	16.11	78.0	369193M	255.52	NG	100
22)	*Chlorobenzene-d5	23.45	117.0	321416	250.00	NG	97
25)	Tetrachloroetrene	21.24	164.0	9122	21.01	NG	90
27)	Toluene-d8	22.23	98.0	366804M	219.81	NG	100
28)	Toluene	22.42	92.0	252244	245.00	NG	96
29)	Chlorobenzene	23.57	112.0	290715M	229.92	NG	93
40)	~~Ethylbenzene~~	~~25.31~~	~~106.0~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
41)	Bromofluorobenzene	27.34	95.0	173644	213.91	NG	91
43)	~~m-Xylene~~	~~26.52~~	~~106.0~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
44)	Xylene (total)	29.36	106.0	6666M	9.18	NG	93

* Compound is ISTD

$$\text{Total Xylene} = \frac{6666}{321416} \times \frac{250}{0.69150} \times \frac{10000}{100} \times \frac{1}{4.0010} \times \frac{1}{0.507}$$

$$= 369.63 \text{ ug/kg}$$

TOTAL ION CHROMATOGRAM



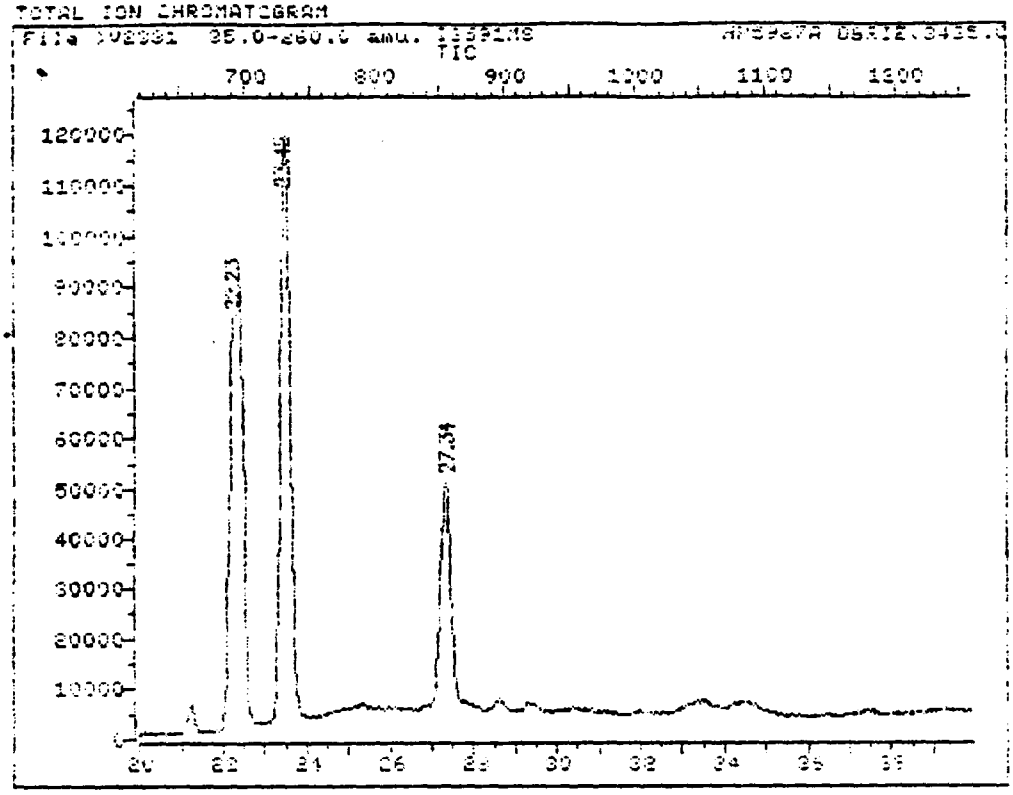
Data File: >V2331::D2 Quant Output File: ^V2331::D'
Name: IF591MS
Misc: HP5987A OBRIE(3435.001.100)P1

Id File: IDVML::ZA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

Operator ID: KAREN
Quant Time: 890419 13:45
Injected at: 890419 13:00

TIC page 1 of 2

TOTAL ION CHROMATOGRAM



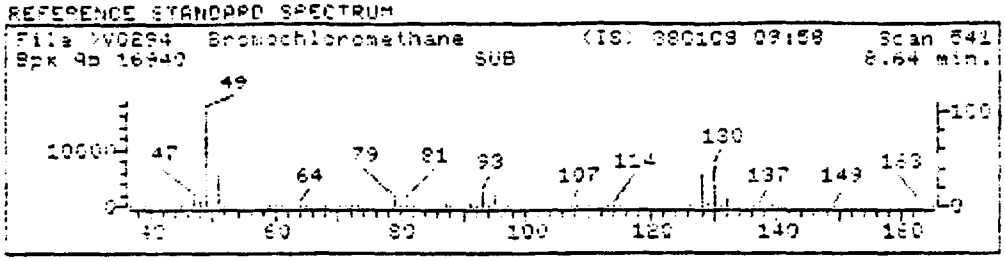
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1

Id File: IDVML::EX
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:58

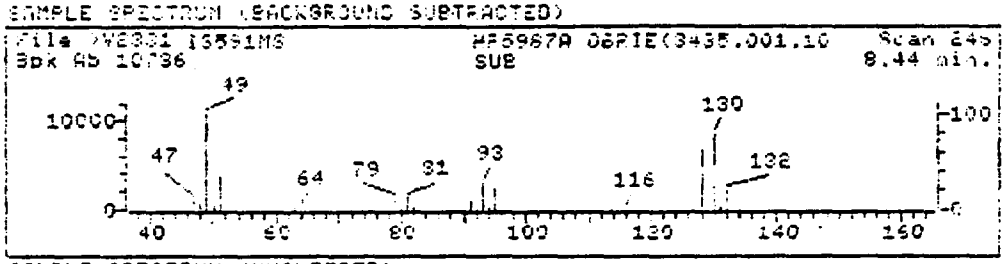
Operator ID: KAREN
Quant Time: 890419 13:45
Injected at: 890419 13:00

TIC page 2 of 2

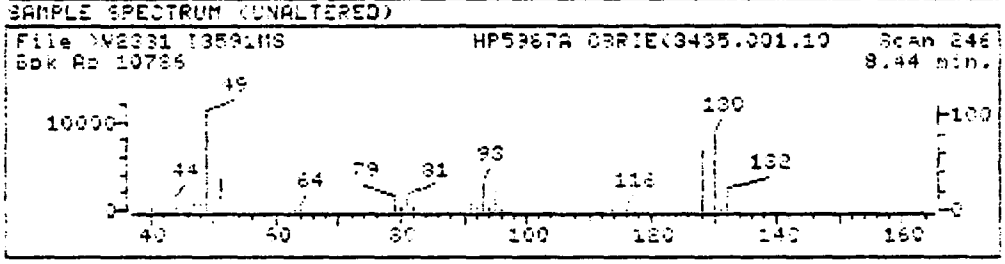
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



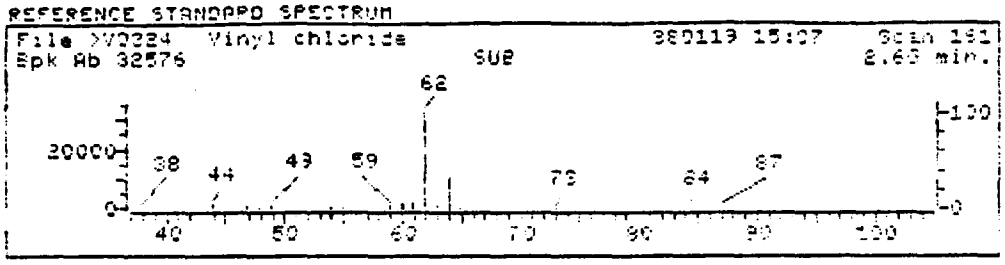
SAMPLE SPECTRUM (UNALTERED)



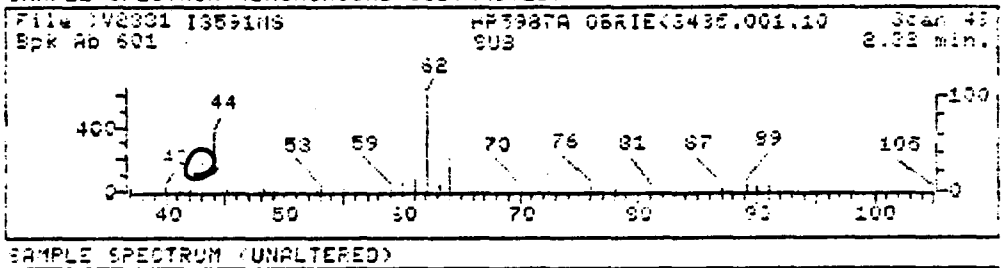
Data File: >V2331::D2 Quant Output File: ^V2331::01
Name: I591MS
Misc: HP5987A OBRIE(3435.001.10)P1
Quant Time: 890419 13:45 Quant ID File: 10/ML::67
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 246
Retention Time: 8.44 min.
Quant Ion: 128.0
Area: 78593
Concentration: 250.00 NG
a-value: 97

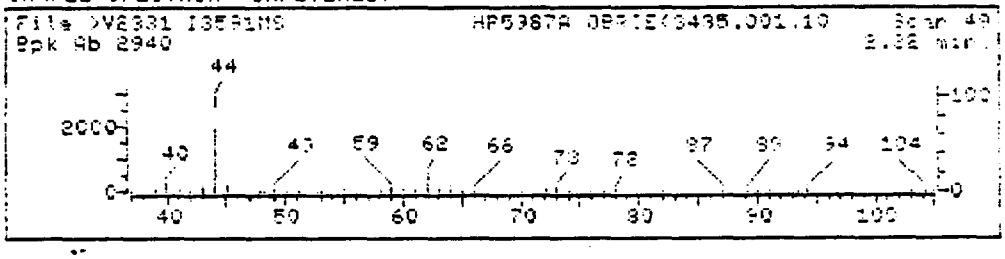
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



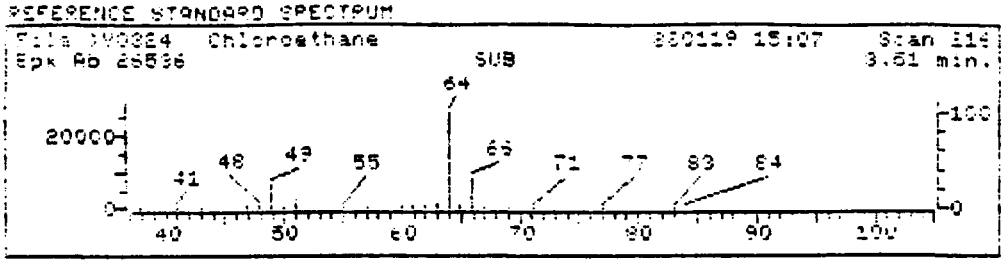
SAMPLE SPECTRUM (UNALTERED)



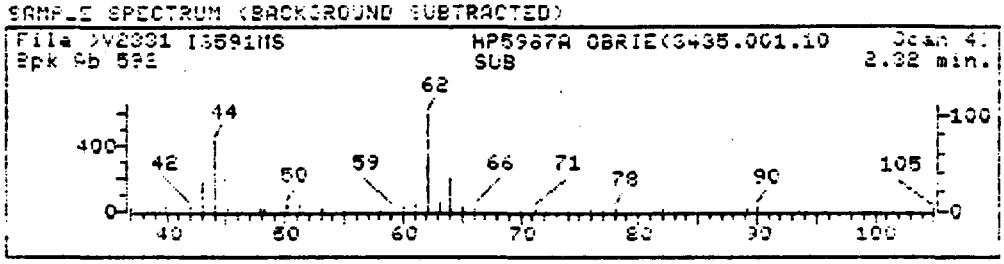
Data File: >V2331::D2 Quant Output File: >V2331::D1
Name: I3591MS
Misc: HP59879 GBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDUML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:50

Compound No: 4
Compound Name: Vinyl Chloride
Scan Number: 49
Retention Time: 2.32 min
Quant Ion: 62.0
Area: 5509M
Concentration: 11.00 NG
q-value: 97

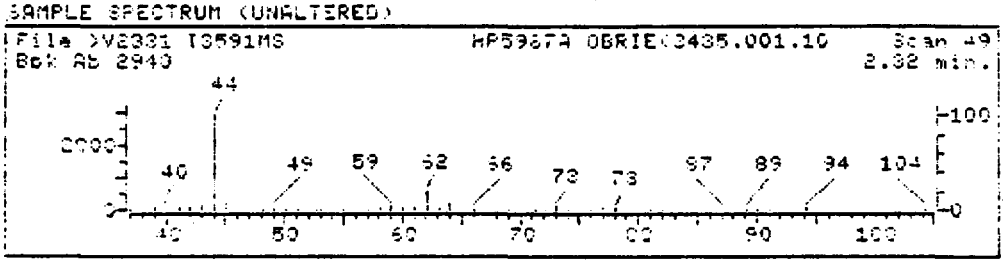
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



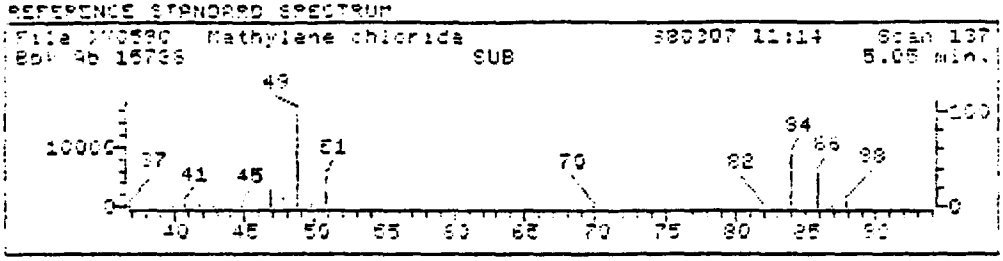
SAMPLE SPECTRUM (UNALTERED)



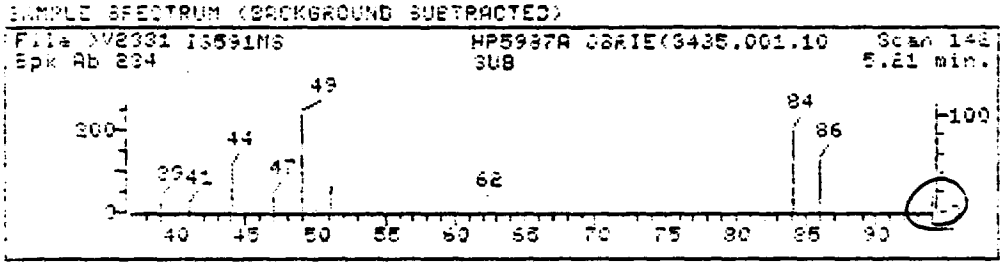
Data File: >V2331::D2 Quant Output File: >V2331::D1
Name: I3591.MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:45 Quant SO File: [SUMLA]E4
Injected at: 890419 15:00 Last Calibration: 890419 10:5

Compound No: 5
Compound Name: Chloroethane
Scan Number: 49
Retention Time: 2.32 min.
Quant Ion: 64.0
Area: 1733
Concentration: 5.22 NG
q-value: 92

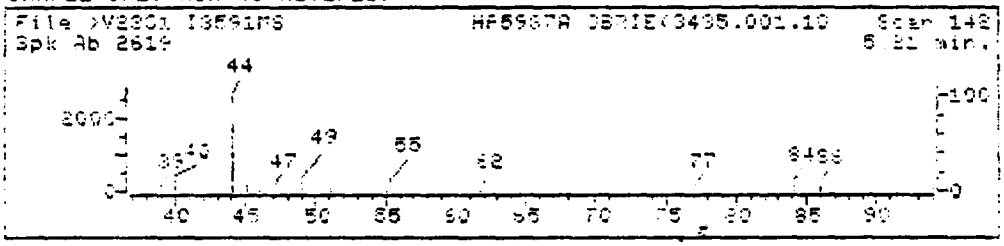
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



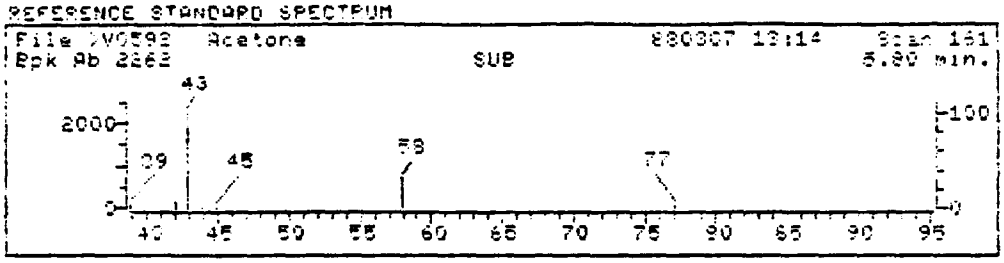
SAMPLE SPECTRUM (UNALTERED)



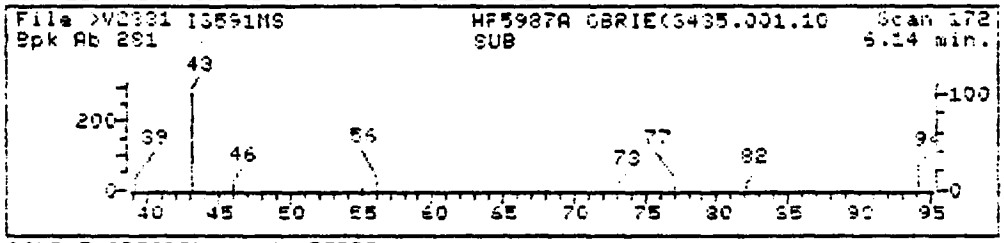
Data File: >V2331::02 Quant Output File: ^V2331::01
Name: I3591MS
Misc: HP5987A DBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDVOL::E1
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 142
Retention Time: 5.21 min.
Quant Ion: 84.0
Area: 1890
Concentration: 3.71 NG
q-value: 82

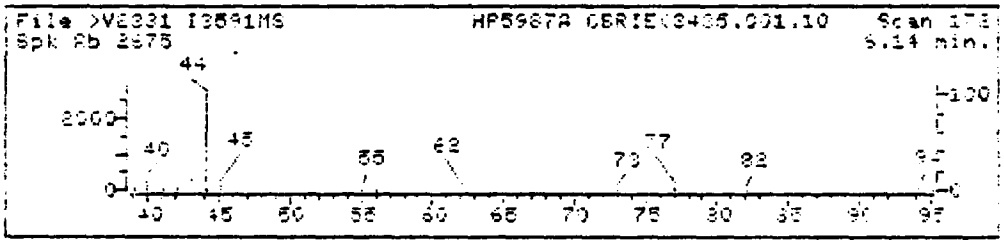
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

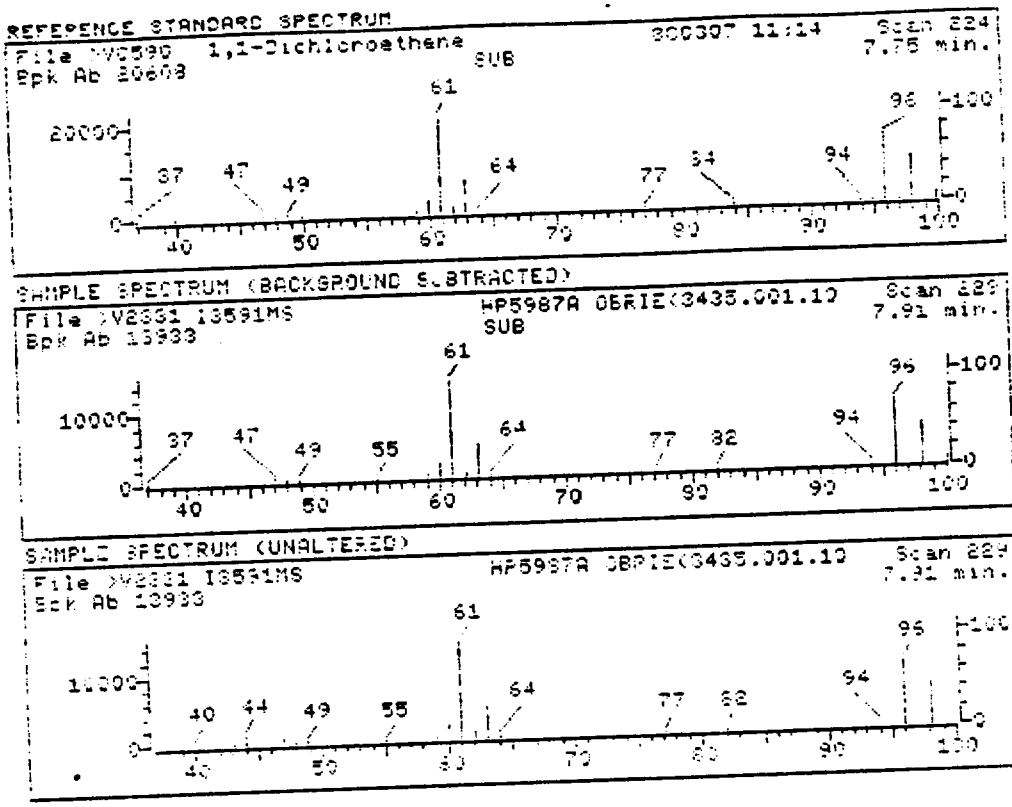


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2331::02 Quant Output File: ^V2331::0
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)F1
Quant Time: 890419 13:45 Quant ID File: IDUML::EA
Injected at: 890419 13:00 Last Calibration: 890419 10:58

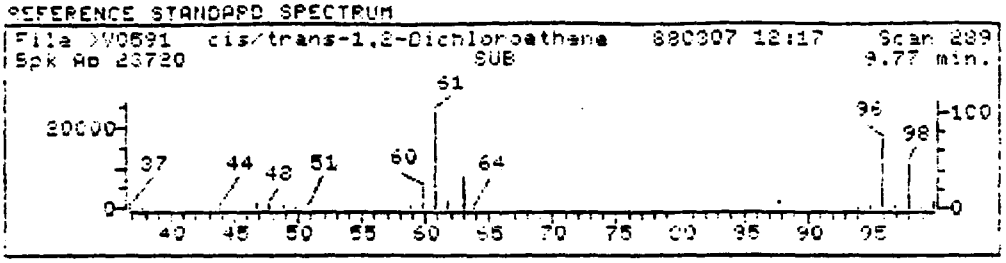
Compound No: 7
Compound Name: Acetone
Scan Number: 172
Retention Time: 6.14 min.
Quant Ion: 43.0
Area: 2744M
Concentration: 18.48 NG
q-value: 88



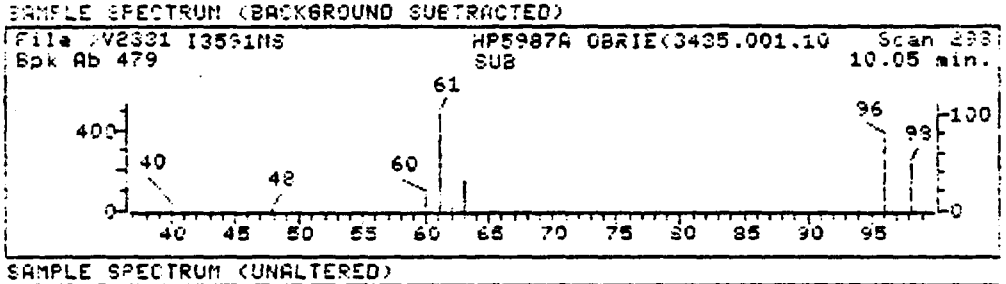
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: 100ML.-EN
Injected at: 890419 13:00 Last Calibration: 890419 10:53

Compound No: 10
Compound Name: 1,1-Dichloroethene
Scan Number: 229
Retention Time: 7.91 min.
Quant Ion: 96.0
Area: 105223
Concentration: 234.60 NG
q-value: 96

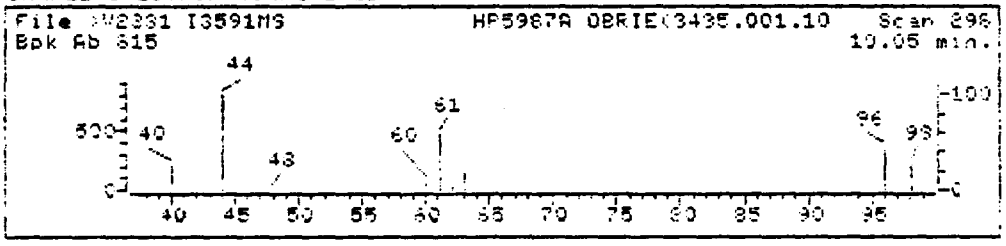
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



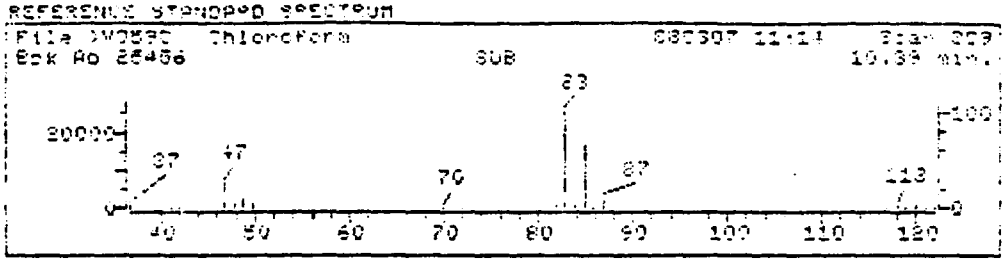
SAMPLE SPECTRUM (UNALTERED)



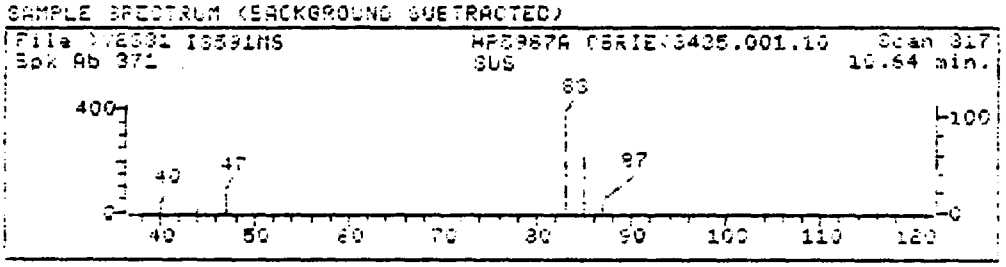
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: ID:ML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 12
Compound Name: 1,2-Dichloroethene (total)
Scan Number: 298
Retention Time: 10.05 min.
Quant Ion: 96.0
Area: 4195
Concentration: 8.72 ng
q-value: 85

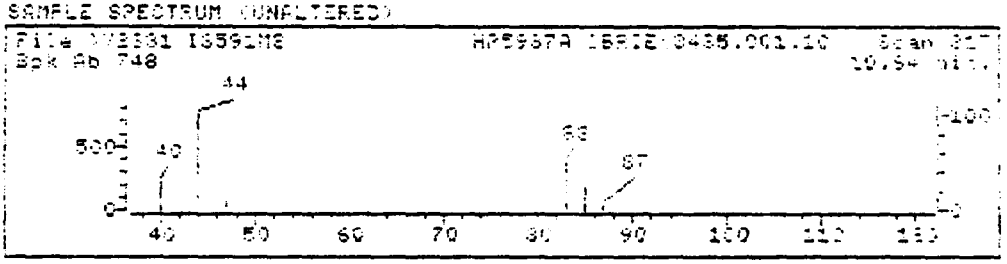
REFERENCE STRIPPED SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



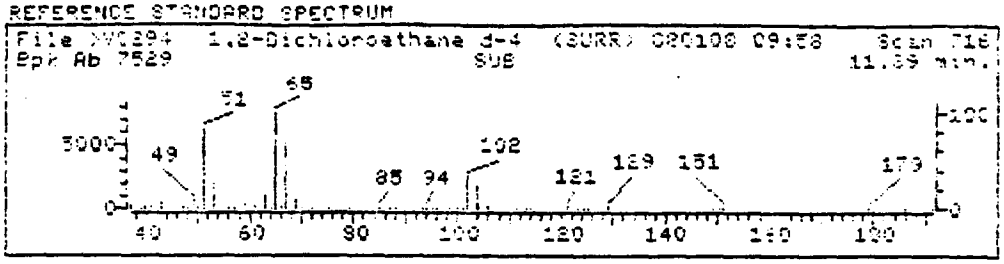
SAMPLE SPECTRUM (UNFILTERED)



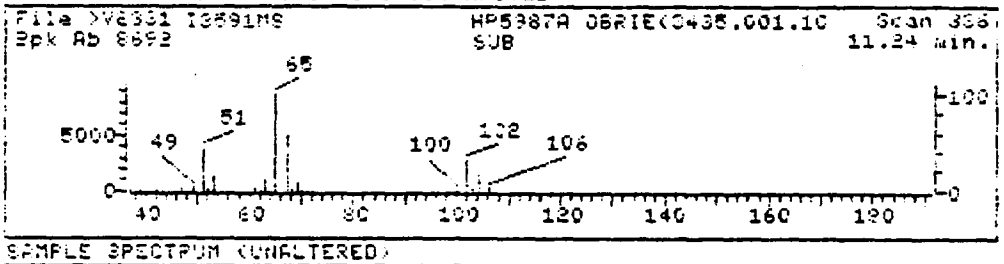
Data File: >V2331::D2 Quant Output File: >V2331::D1
Name: I3591MS
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: ICUMS::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:57

Compound No: 13
Compound Name: Chloroform
Scan Number: 317
Retention Time: 10.64 min.
Quant Ion: 83.0
Area: 3856
Concentration: 4.30 NG
q-value: 93

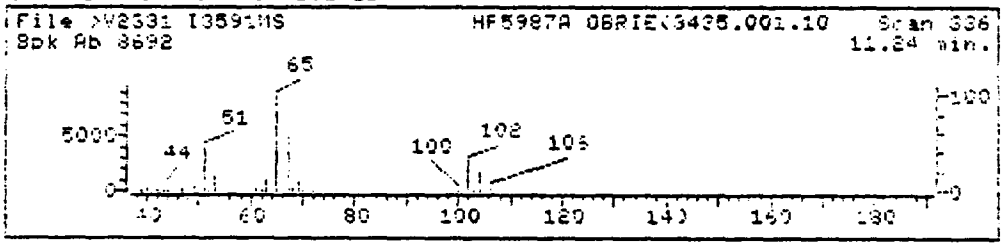
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



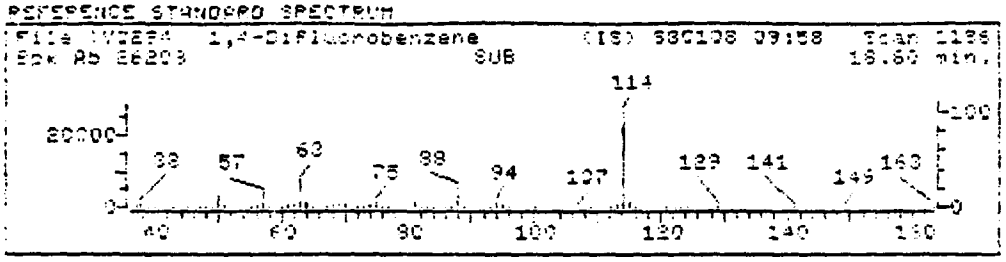
SAMPLE SPECTRUM (UNALTERED)



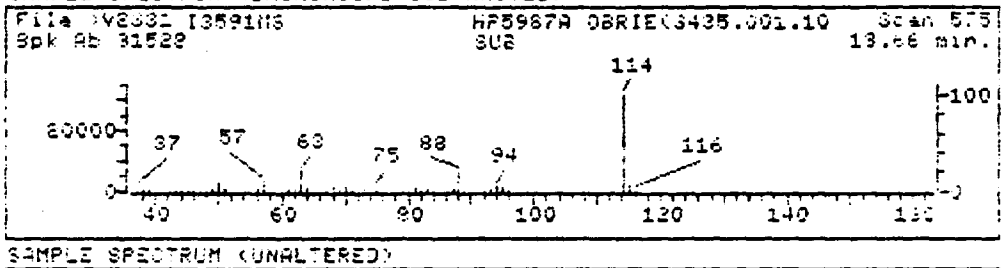
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: ID0ML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:5[illegible]

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 336
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 98982
Concentration: 213.11 NG
q-value: 85

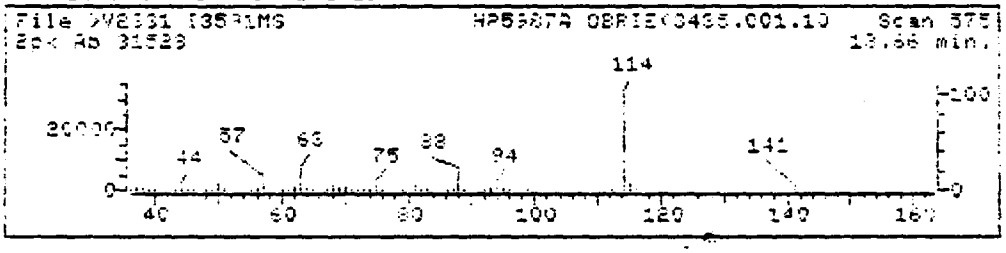
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



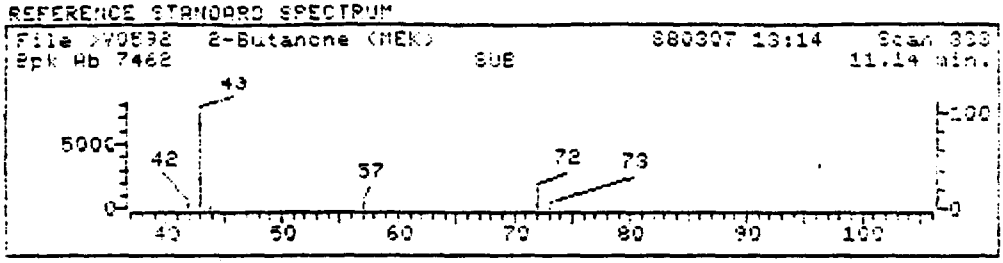
SAMPLE SPECTRUM (UNALTERED)



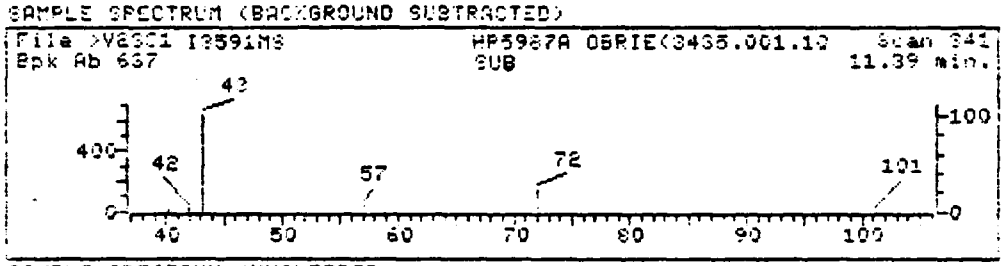
Data File: >V2331::D2 Quant Output File: ^V2331:.D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 15:45 Quant ID File: ID.ML:-EX
Injected at: 890419 13:00 Last Calibration: 890419 13:58

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 575
Retention Time: 18.66 min.
Quant Ion: 114 0
Area: 363562M
Concentration: 250.00 NG
q-value: 100

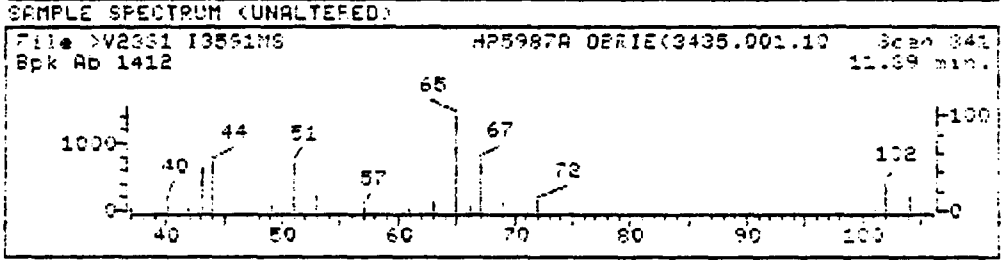
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



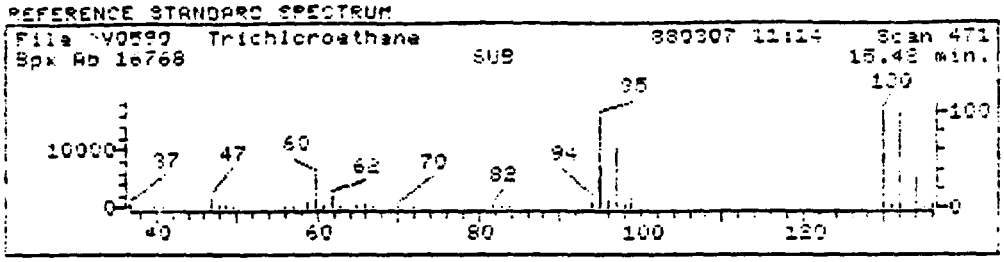
SAMPLE SPECTRUM (UNALTERED)



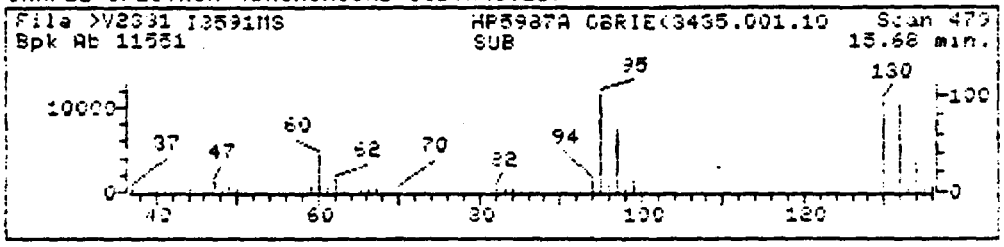
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDVML::D
Injected at: 890419 13:00 Last Calibration: 890419 10:

Compound No: 19
Compound Name: 2-Butanone
Scan Number: 341
Retention Time: 11.39 min.
Quant Ion: 72.0
Area: 1070
Concentration: 18.09 NG
q-value: 96

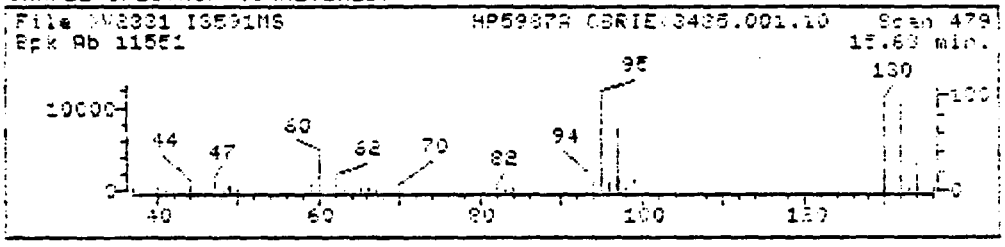
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



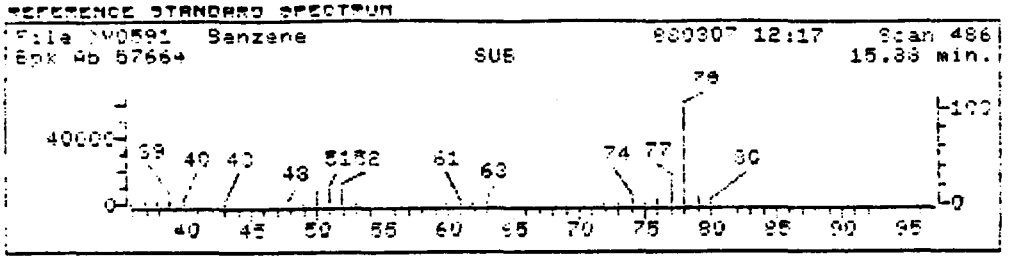
SAMPLE SPECTRUM (UNALTERED)



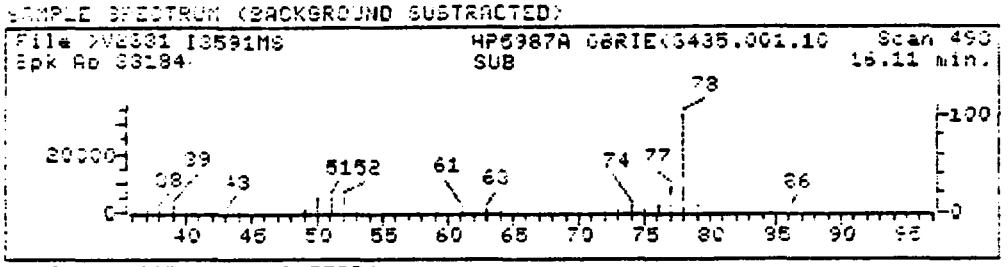
Data File: >V2331::02 Quant Output File: ^V2331::01
Name: I3591MS
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDVOL::ET
Injected at: 890419 13:00 Last Calibration: 890419 10:13

Compound No: 26
Compound Name: Trichloroethene
Scan Number: 479
Retention Time: 15.68 min.
Quant Ion: 130.0
Area: 126198
Concentration: 236.85 NG
q-value: 98

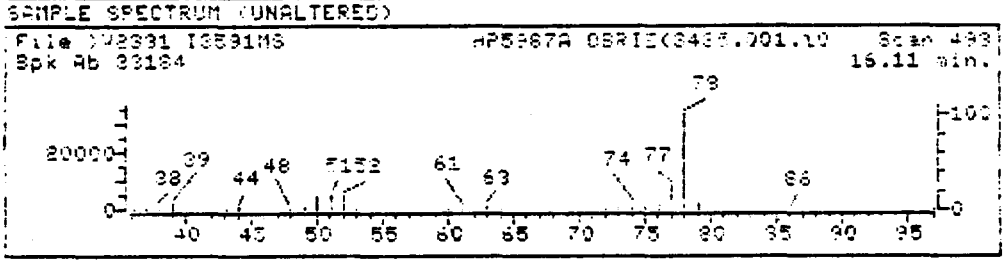
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



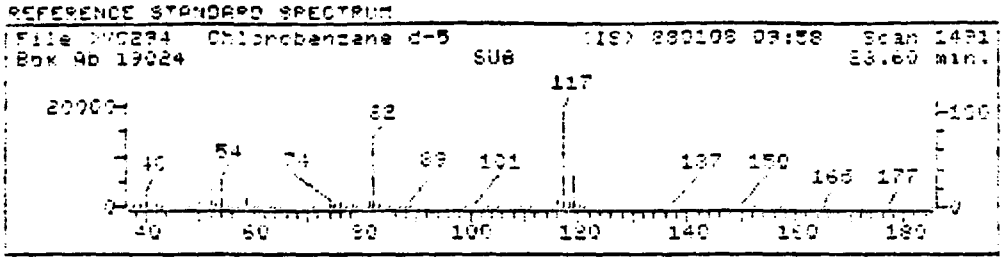
SAMPLE SPECTRUM (UNALTERED)



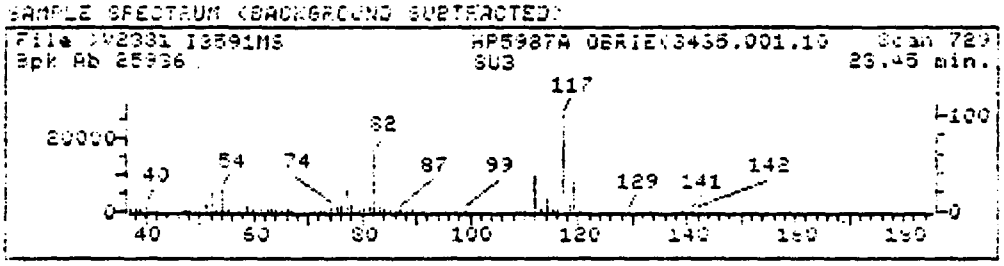
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDJML::EA
Injected at: 890419 13:00 Last Calibration: 890419 10:56

Compound No: 27
Compound Name: Benzene
Scan Number: 493
Retention Time: 16.11 min.
Quant Ion: 78 0
Area: 369193M
Concentration: 255.52 NG
q-value: 100

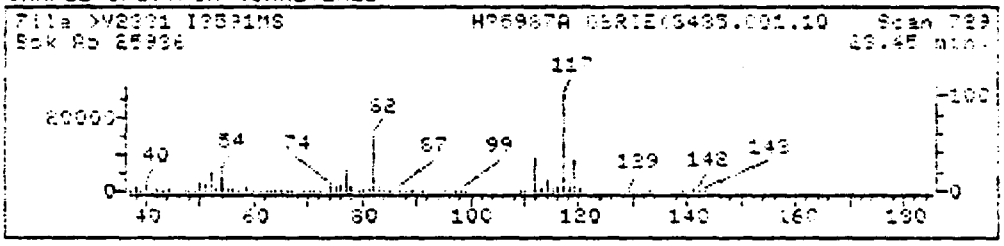
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



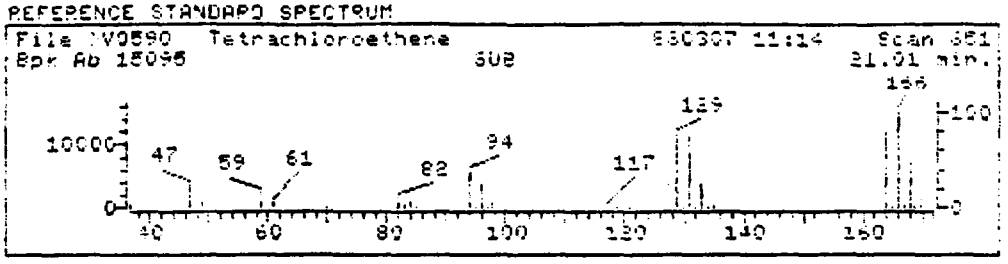
SAMPLE SPECTRUM (UNALTERED)



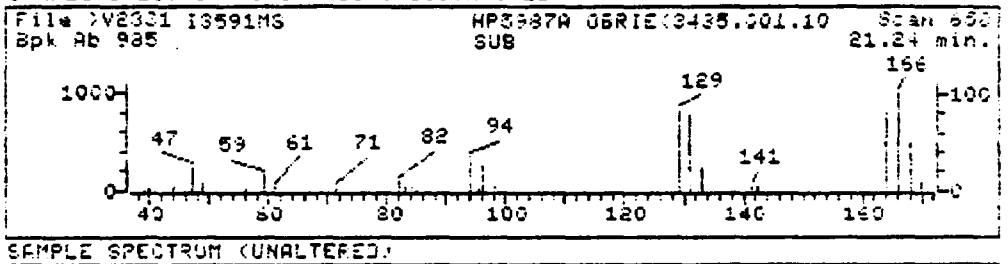
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDVML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:53

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 729
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 321416
Concentration: 250.00 NG
q-value: 97

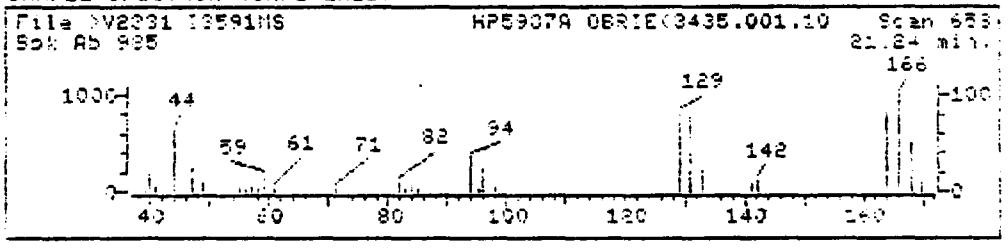
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



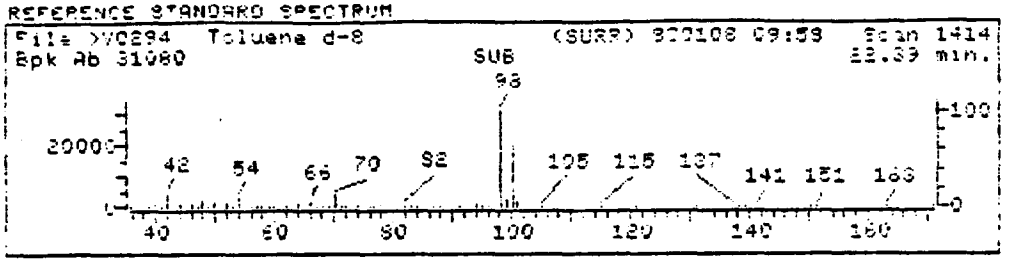
SAMPLE SPECTRUM (UNALTERED)



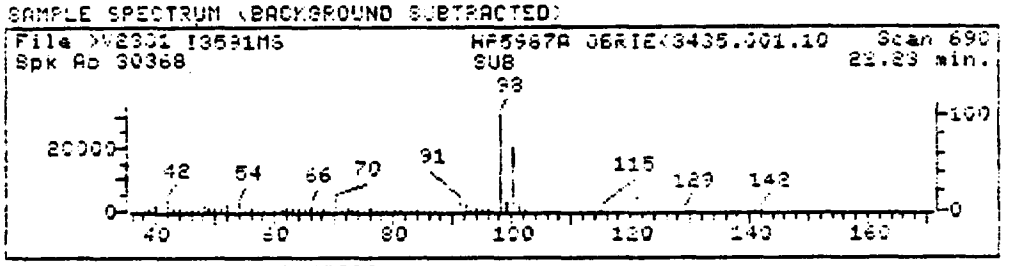
Data File: >V2331::D2 Quant Output File: ^V2331::D
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: ID:ML::E
Injected at: 890419 13:00 Last Calibration: 890419 10:5

Compound No: 55
Compound Name: Tetrachloroethene
Scan Number: 658
Retention Time: 21.24 min.
Quant Ion: 164.0
Area: 9122
Concentration: 21.02 NG
q-value: 90

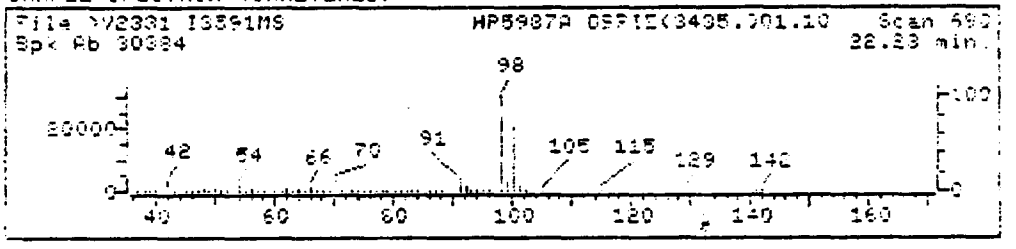
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



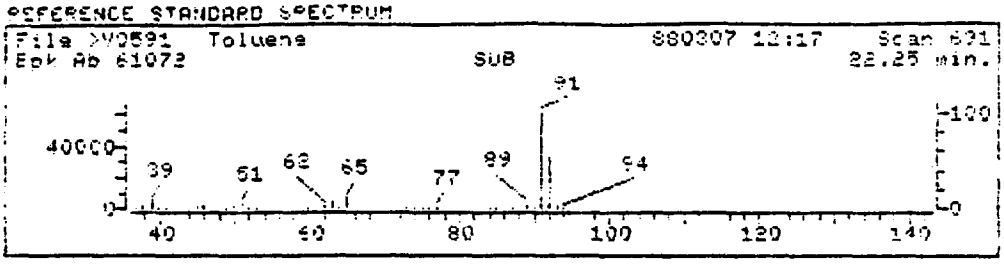
SAMPLE SPECTRUM (UNALTERED)



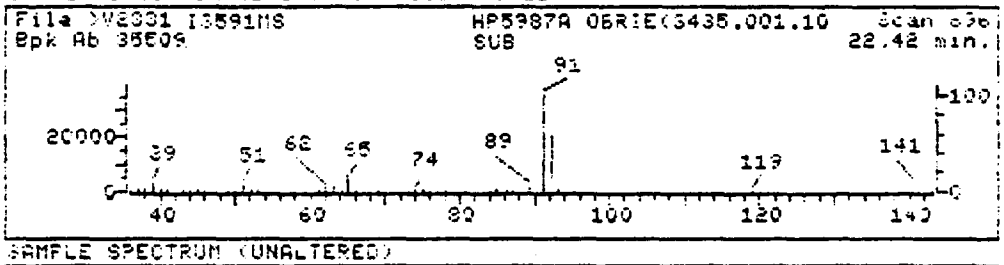
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDUML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 690
Retention Time: 22.23 min.
Quant Ion: 98.0
Area: 366824M
Concentration: 219.81 NG
q-value: 100

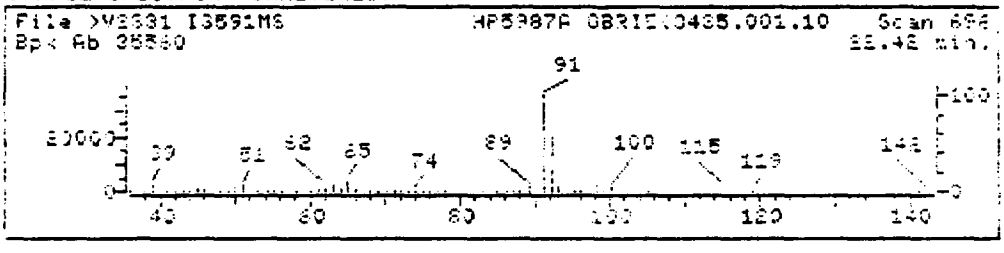
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



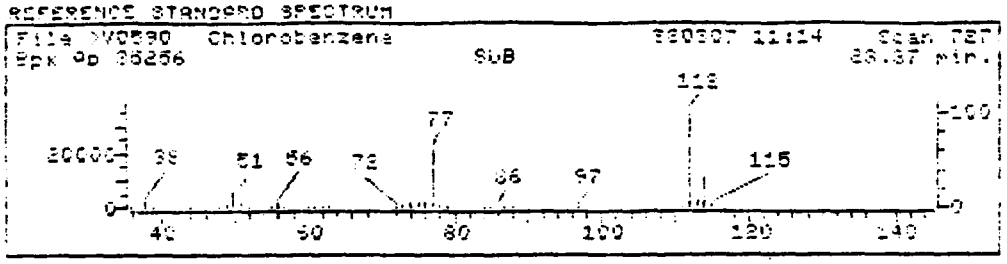
SAMPLE SPECTRUM (UNALTERED)



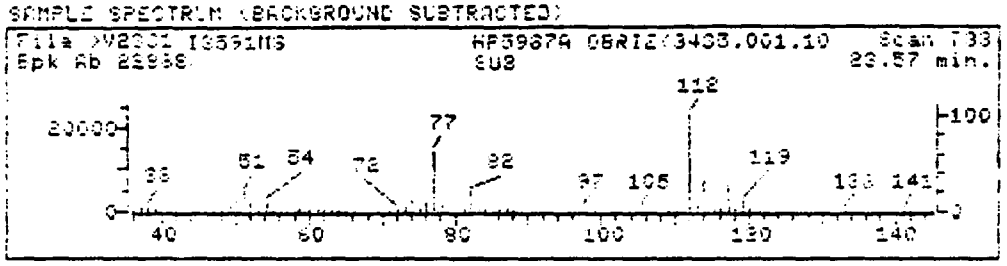
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDVPL::1?
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 56
Compound Name: Toluene
Scan Number: 696
Retention Time: 22.42 min.
Quant Ion: 92.0
Area: 252144
Concentration: 248.00 NG
q-value: 96

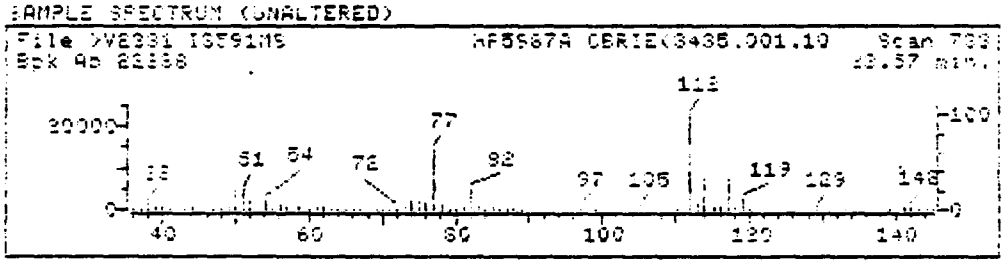
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



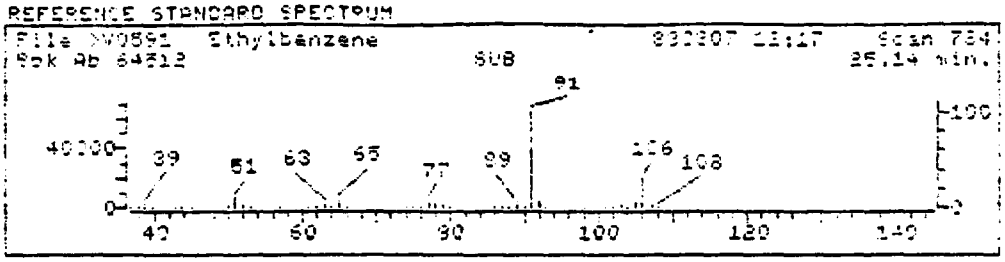
SAMPLE SPECTRUM (UNALTERED)



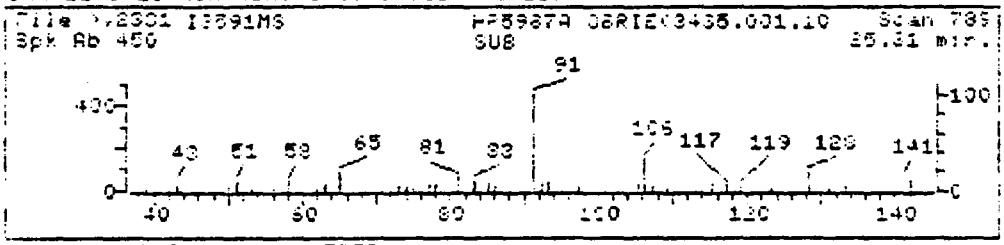
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I0591MS
Misc: HP5987A OBRIE(3435.001.10)P1
Quant Time: 890419 13:45 Quant ID File: IDUML::EA
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 39
Compound Name: Chlorobenzene
Scan Number: 733
Retention Time: 23.57 min.
Quant Ion: 112.0
Area: 290715M
Concentration: 229.92 NG
q-value: 99

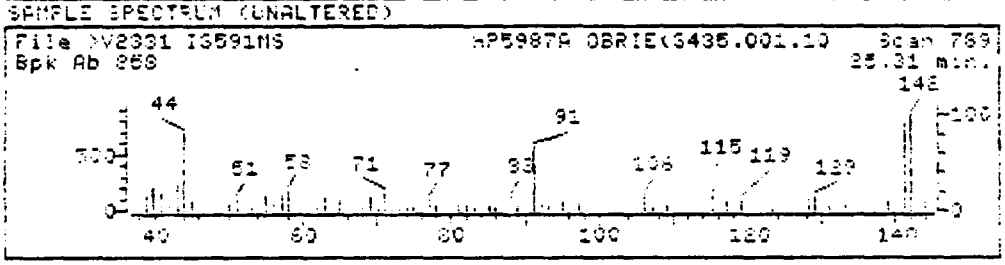
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



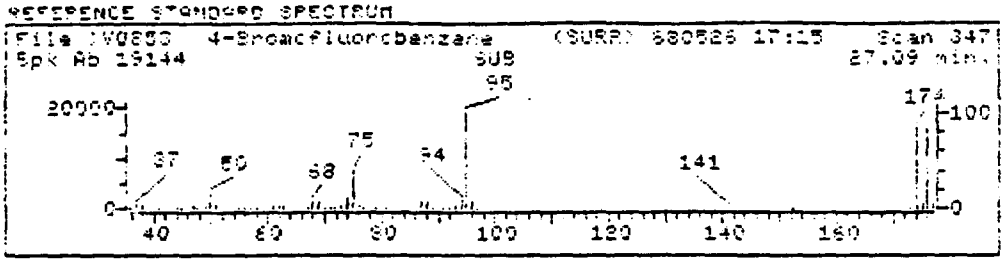
SAMPLE SPECTRUM (UNALTERED)



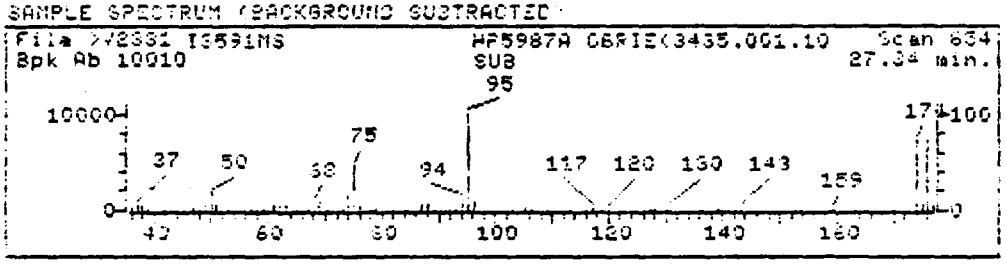
Data File: >V2331::02 Quant Output File: >V2331::01
Name: I591MS
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 15:45 Quant ID File: IDML::01
Injected at: 890419 15:00 Last Calibration: 890419 10:58

Compound No: 40
Compound Name: Ethylbenzene
Scan Number: 789
Retention Time: 25.31 min.
Quant Ion: 106.0
Area: 1990
Concentration: 5.27 NG
q-value: 92

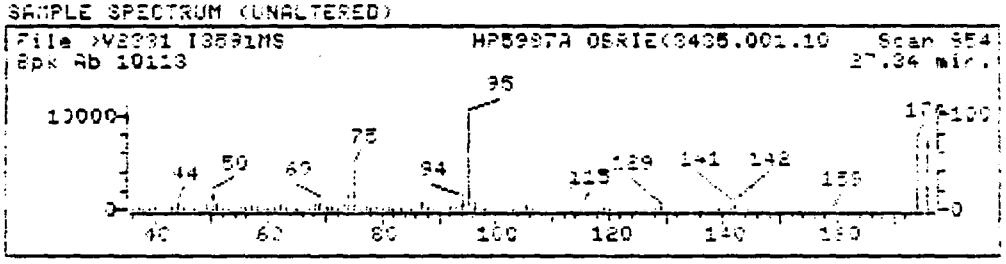
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



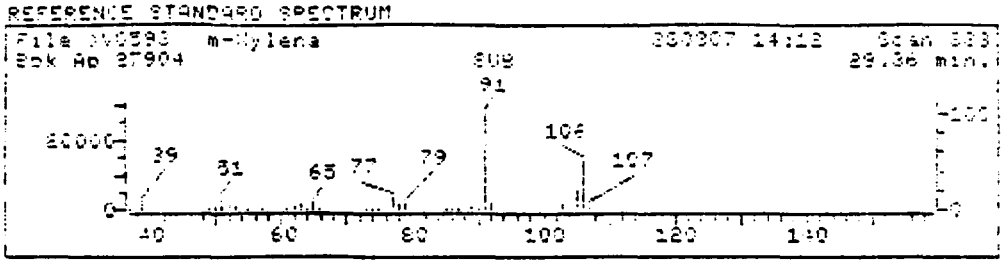
SAMPLE SPECTRUM (UNALTERED)



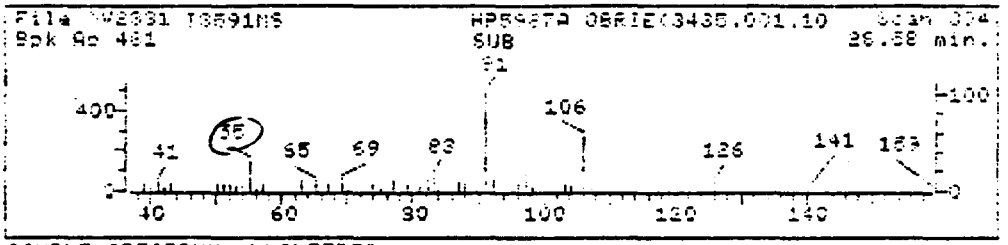
Data File: >V2331::D2 Quant Output File: ^V2331::D1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDUML::EX
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 654
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 173644
Concentration: 213.91 NG
q-value: 89

REFERENCE STANDARD SPECTRUM

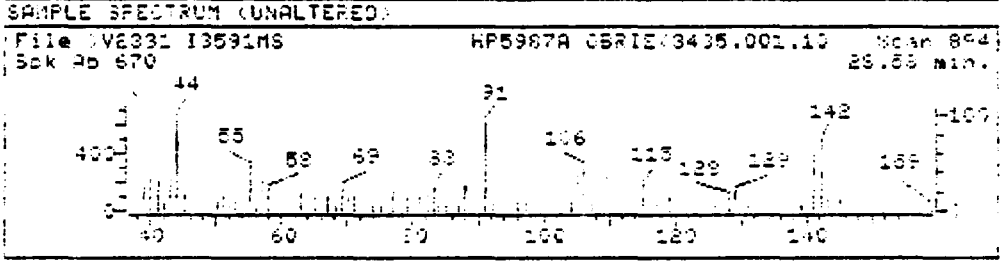


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



much interference

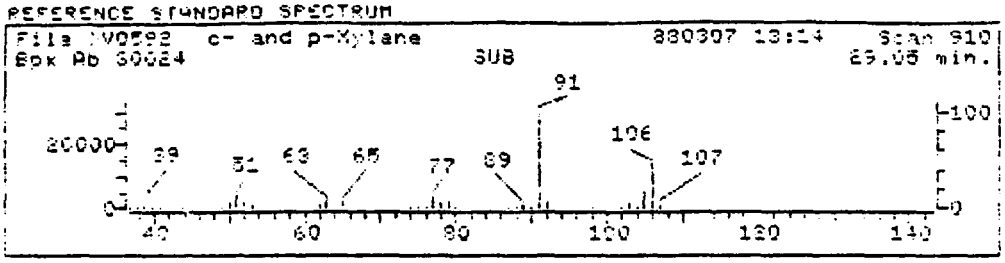
SAMPLE SPECTRUM (UNALTERED)



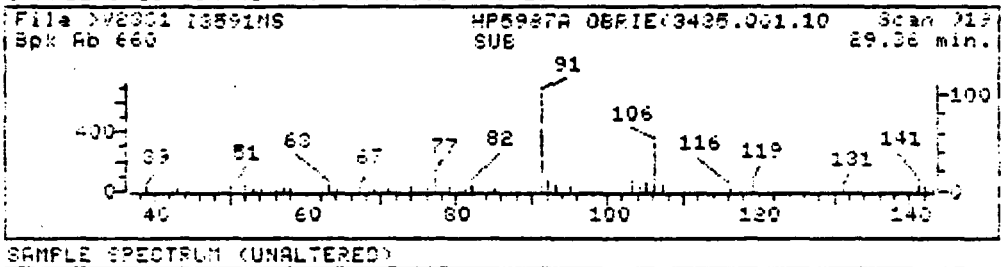
Data File: >V2331::02 Quant Output File: >V2331::01
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: I3UML::I"
Injected at: 890419 13:00 Last Calibration: 890419 10:39

Compound No: 45
Compound Name: m-Xylene
Scan Number: 894
Retention Time: 23.53 min.
Quant Ion: 106.0
Area: 4769
Concentration: 5.37 NG
q-value: 86

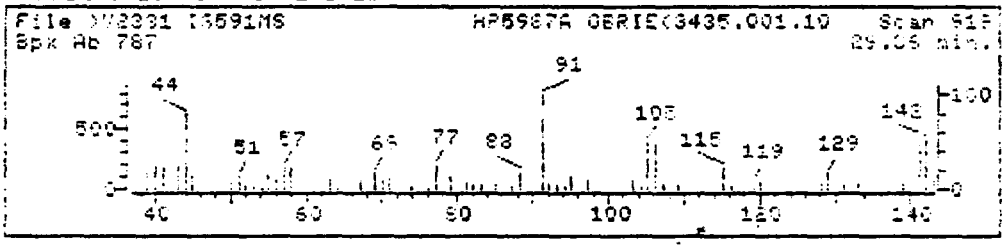
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >V2331::D2 Quant Output File: ^V2331::C1
Name: I3591MS
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 13:45 Quant ID File: IDUML::EA
Injected at: 890419 13:00 Last Calibration: 890419 10:58

Compound No: 44
Compound Name: Xylene (total)
Scan Number: 919
Retention Time: 29.36 min.
Quant Ion: 106.0
Area: 6665M
Concentration: 9.18 NG
q-value: 93

626

Matrix Spike Duplicate

Quant Rev: 0 Quant ... 890419 17:5...
Injected at: 1.000...
Dilution Factor:

...tor ID: LAREN
...t File: ^U2352::D1
File: >U2352::D2
: 15391 ...
: HP5987A OBRIE(3435.001.100;P1

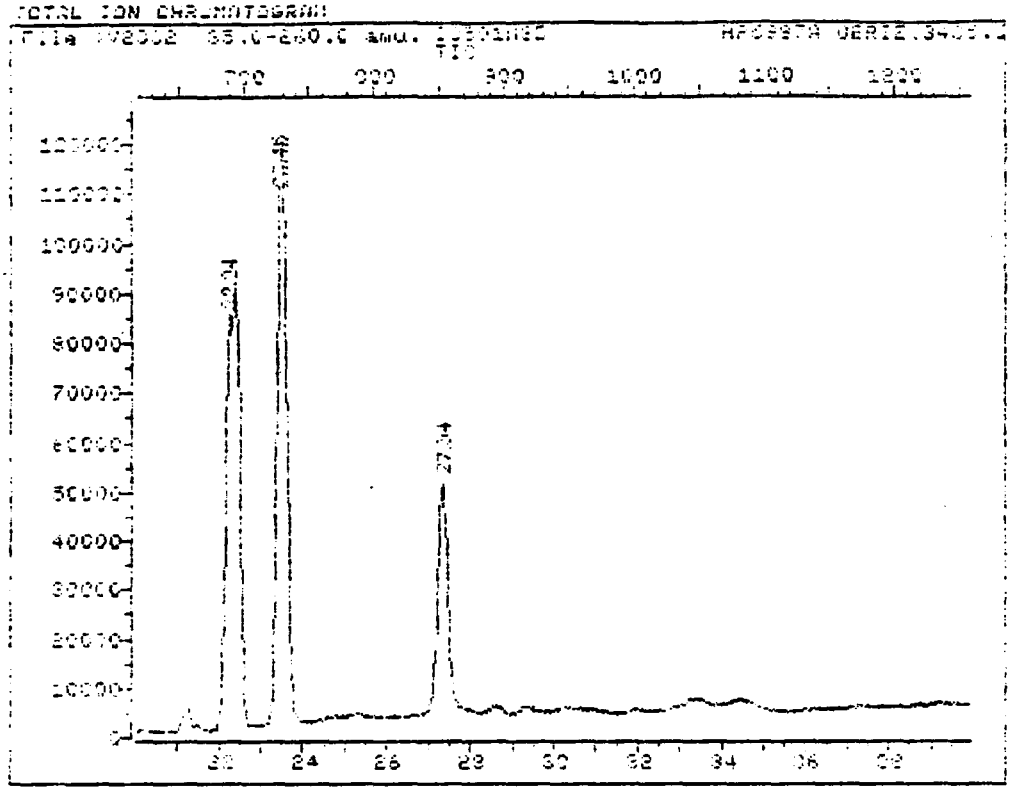
...le: ...
...e: CLP VOA ... FILE (PACKED COLUMN)
: Calibration: 890419 10:58

Compound	R.T.	Q ion	Area	Conc	Units	q
*Bromochloromethane	8.48	128.0	80327M	250.00	NG	99
Vinyl Chloride	2.32	62.0	5909	11.55	NG	99
~~Methylene Chloride~~	[illegible]	[illegible]	[illegible]	[illegible]	NG	[illegible]
~~Acetone~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1,1-Dichlorcethene	7.92	96.0	106686	232.73	NG	94
1,2-Dichloroethene (total)	10.06	96.0	4735	9.57	NG	76
1,2-Dichloroethane-d4	11.24	65.0	101089	212.75	NG	84
1,2-Dichloroethane						
*1,4-Difluorobenzene	18.63	114.0	373835	250.00	NG	100
2-Butanone	11.40	72.0	1517	24.59	NG	92
Trichloroethene	15.68	130.0	131664M	237.06	NG	96
Benzene	16.12	78.0	302229	253.71	NG	100
*Chlorobenzene-d5	23.45	117.0	330734M	250.00	NG	[illegible]
Tetrachloroethene	21.21	164.0	7931	17.74	NG	[illegible]
Toluene-d8	22.24	98.0	369625M	215.08	NG	100
Toluene	22.43	92.0	359649M	244.91	NG	[illegible]
Chlorobenzene	23.55	112.0	305000	254.25	NG	[illegible]
~~Ethylbenzene~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Bromofluorobenzene	27.34	95.0	175477M	213.[illegible]	NG	36
~~Styrene~~	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Xylene (total)	29.37	106.0	6546M	3.76	NG	76

* Compound is ISTD

$$\text{Total Xylene} = \frac{6548}{330984} \times \frac{250}{0.69150} \times \frac{1}{4.0171} \times \frac{1}{0.507} \times \frac{10000}{100}$$

$$\text{Total xylene} = 351.18\ \text{ug/kg}$$



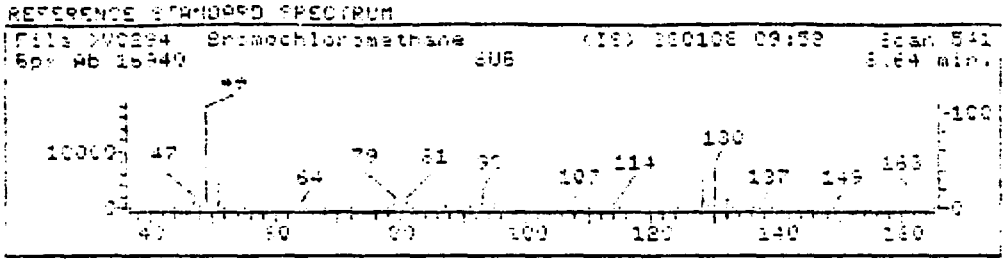
Data File: >V2352::D2 Quant Output File: ^V2352::D1
Name: I95S1MSD
Misc: HP5987A SERIE(3435.001.100)P1

Id File: IDVOL::EA
Title: CLP VOA ID FILE (PACKED COLUMN)
Last Calibration: 890419 10:56

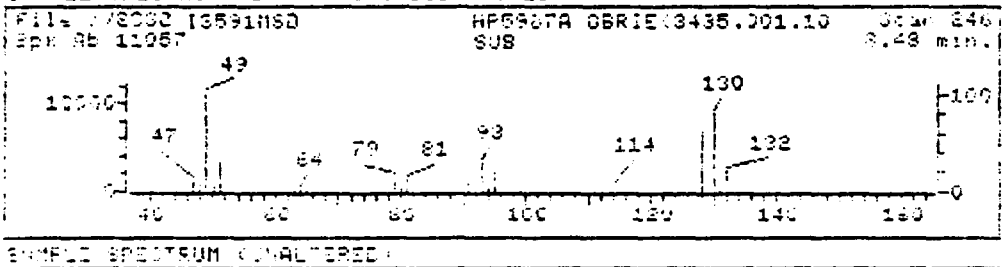
Operator ID: KAREN
Quant Time: 890419 14:43
Injected at: 890419 13:56

TIC page 2 of 2

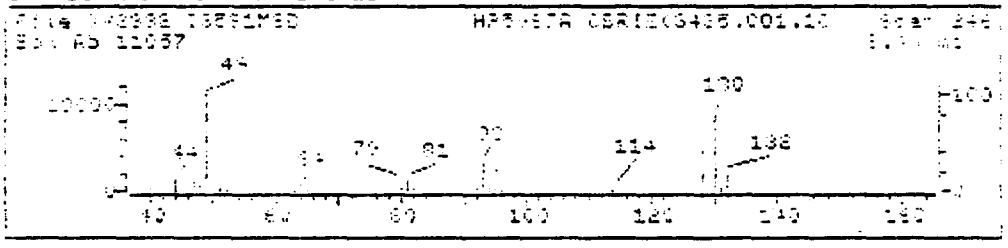
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BROMOFLUORO SUBTRACTED)



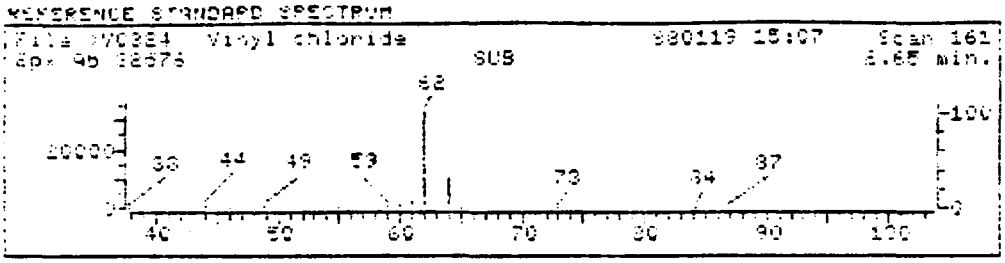
SAMPLE SPECTRUM (UNALTERED)



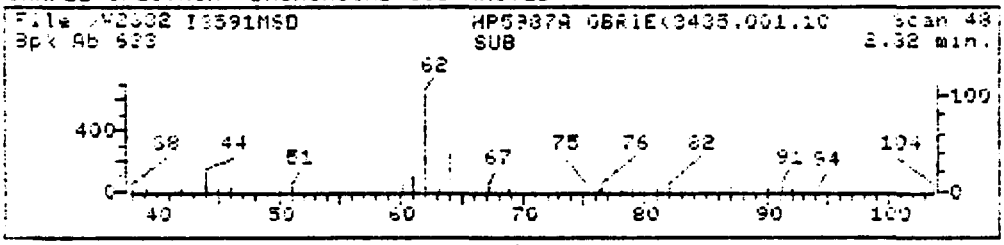
Data File: A02332.D02 Quant Output File: A02332.C1
Name: ICV01MSD
Misc: HP5987A OBRIE(3435.001.100,P1
Quant Time: 890419 14:43 Quant ID File: ICVMULT.E
Injected at: 890419 13:56 Last Calibration: 890419 13:56

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 246
Retention Time: 8.48 min.
Quant Ion: 128.0
Area: 603174
Concentration: 250.00 NG
q-value: 99

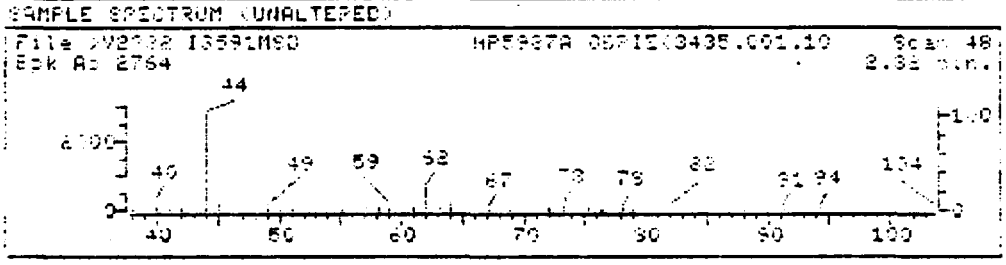
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

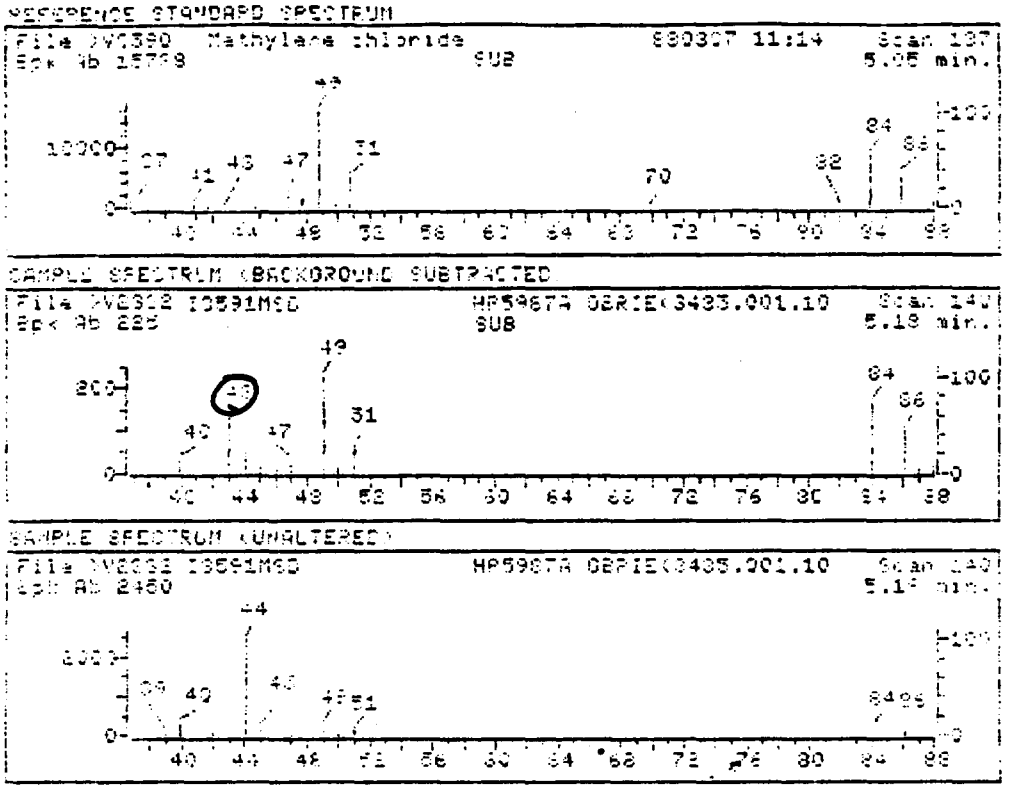


SAMPLE SPECTRUM (UNALTERED)



Data File: >V2332::D2 Quant Output File: ^V2332::01
Name: I3591MSD
Misc: HP5987A GBRIE(3435.001.10)P1
Quant Time: 890419 14:43 Quant ID File: I3UML::EX
Injected at: 890419 13:56 Last Calibration: 890419 10:50

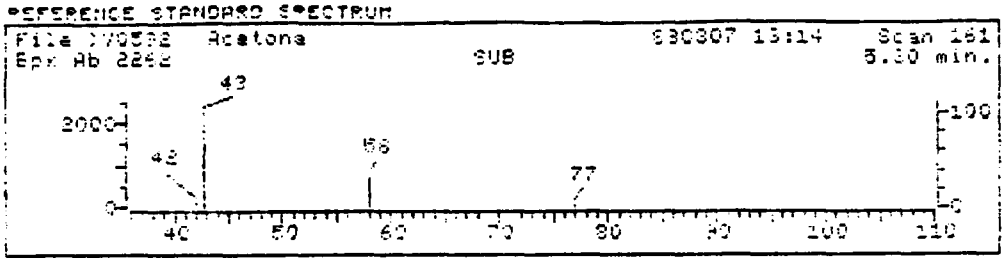
Compound No: 4
Compound Name: Vinyl Chloride
Scan Number: 48
Retention Time: 2.32 min.
Quant Ion: 62.0
Area: 5909
Concentration: 11.55 NG
q-value: 89



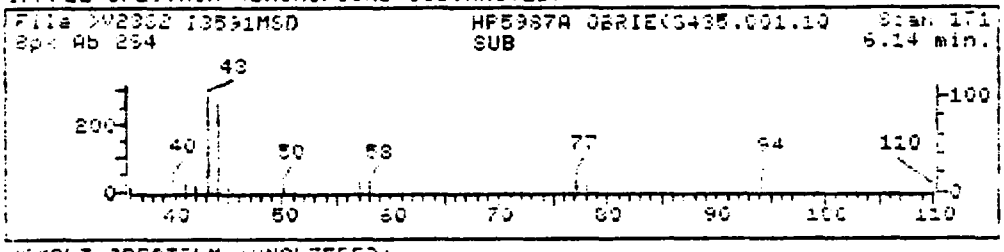
Data File: :V0332::02 Quant Output File: :V0332 :01
Name: I3591M0D
Misc: HP5987A 08RIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDVOL::CX
Injected at: 890419 13:56 Last Calibration: 890419 1[illegible]:56

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 140
Retention Time: 5.18 min.
Quant Ion: 84.0
Area: 1597
Concentration: 5.06 UG
Qvalue: 92

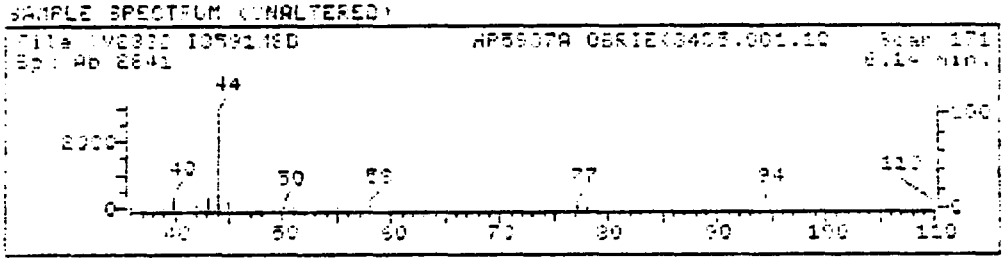
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



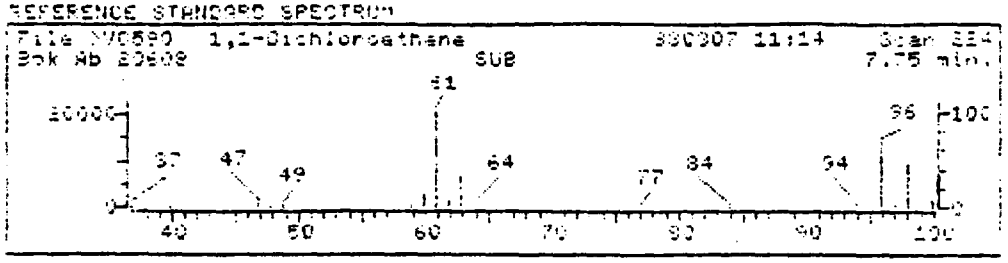
SAMPLE SPECTRUM (UNALTERED)



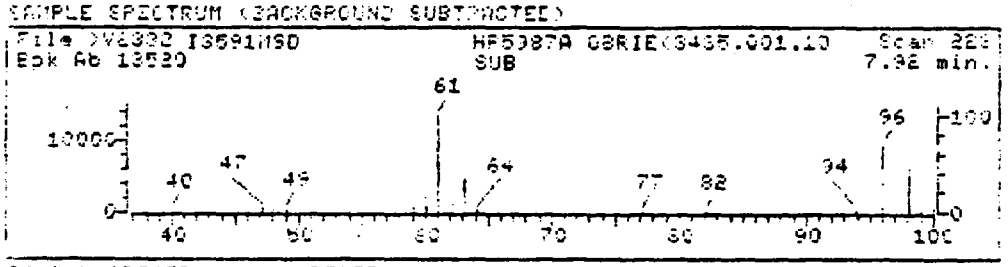
Data File: >V0302::02 Quant Output File: >V0302::01
Name: I0591M5D
Misc: HP5987A 08RIE(3435.001.100)01
Quant Time: 890419 14:43 Quant II File: I0JM...05
Injected at: 890419 13:56 Last Calibration: 890419 10:08

Compound No: 7
Compound Name: Acetone
Scan Number: 171
Retention Time: 6.14 min.
Quant Ion: 43.0
Area: 2318
Concentration: 18.56 NG
q-value: 61

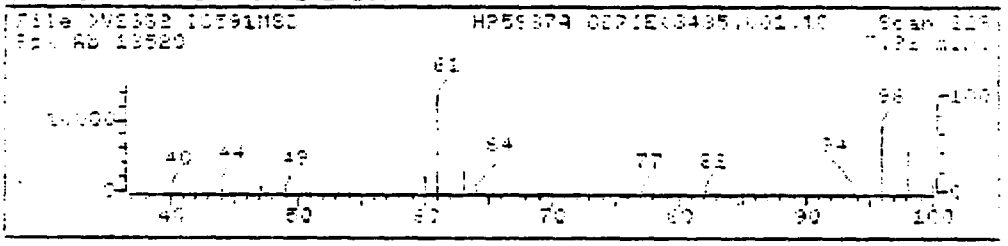
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



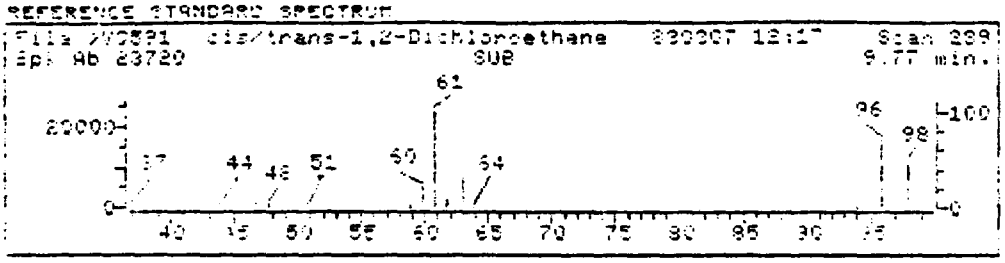
SAMPLE SPECTRUM (UNALTERED)



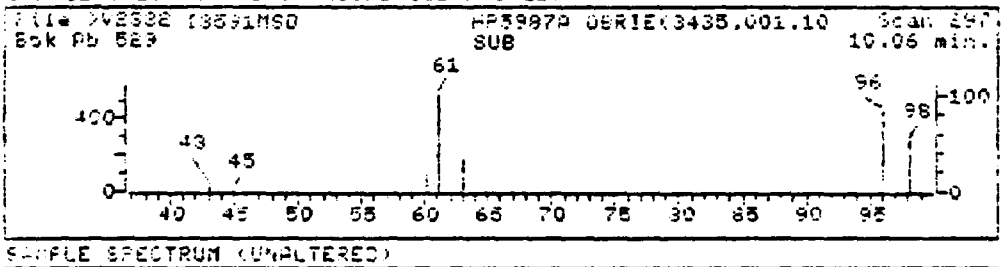
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3591MSD
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: ID:VOL1.ID
Injected at: 890419 13:56 Last Calibration: 890419 10:[illegible]

Compound No: 10
Compound Name: 1,1-Dichloroethene
Scan Number: 220
Retention Time: 7.92 m.n.
Quant Ion: 96.0
Area: 106696
Concentration: 272.77 NG
q-value: 94

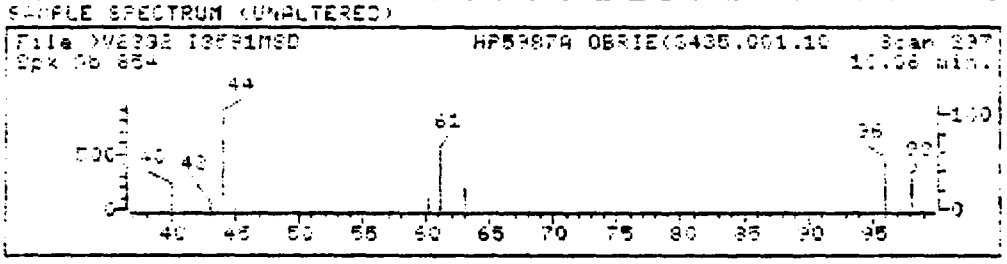
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



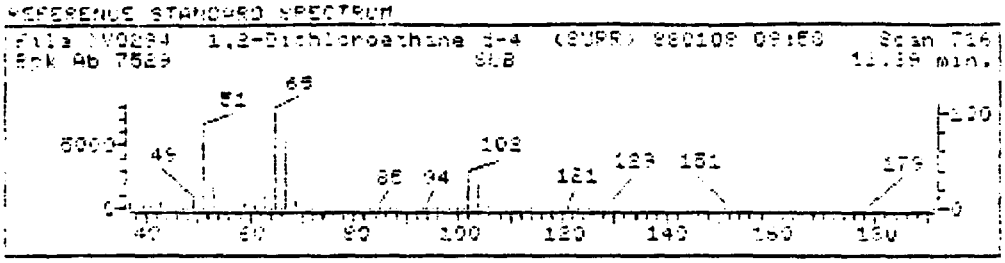
SAMPLE SPECTRUM (UNALTERED)



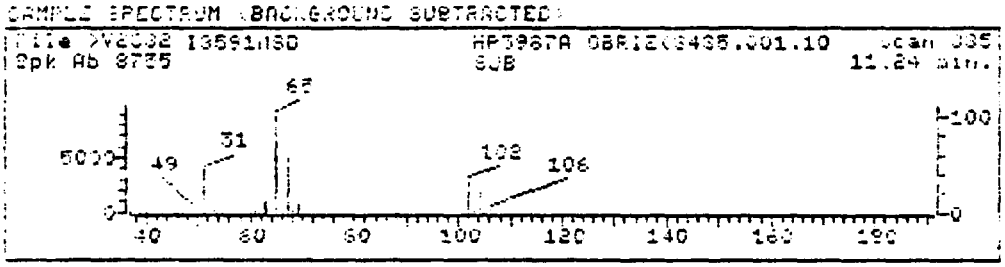
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: 13591MSD
Misc: HP59979 OBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant IL File: ID%ML::E7
Injected at: 890419 13:56 Last Calibration: 890419 10:58

Compound No: 12
Compound Name: 1,2-Dichloroethene (total)
Scan Number: 297
Retention Time: 10.06 min.
Quant Ion: 96.0
Area: 4706
Concentration: 9.57 NG
q-value: 76

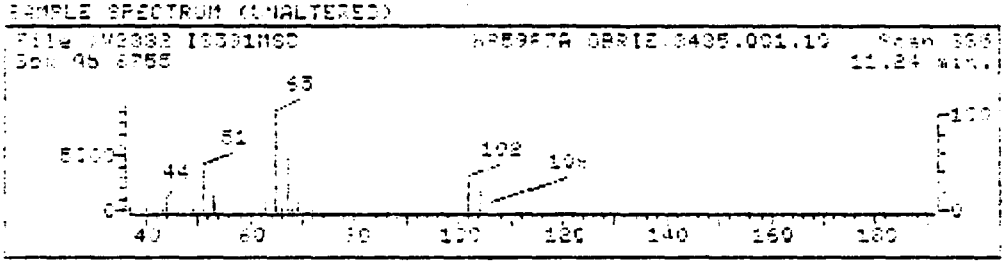
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



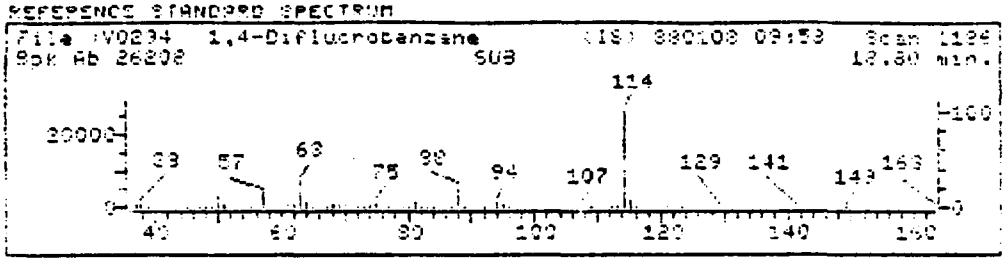
SAMPLE SPECTRUM (UNALTERED)



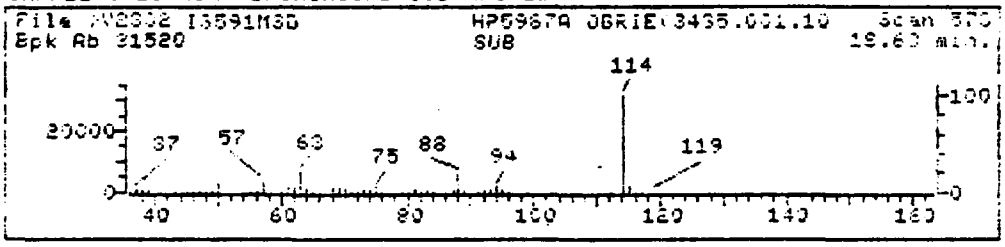
Data File: :V2332::02 Quant Output File: ^V2332::01
Name: I3591NSD
Misc: HP5973A OBRIE(3435.001.100)P1
Quant Time: 990419 14:43 Quant IS File: ISUML::SV
Injected at: 990419 13:56 Last Calibration: 990419 10:53

Compound No: 15
Compound Name: 1,2-Dichloroethane-d4
Scan Number: 335
Retention Time: 11.24 min.
Quant Ion: 65.0
Area: 101089
Concentration: 212.95 NG
qvalue: 84

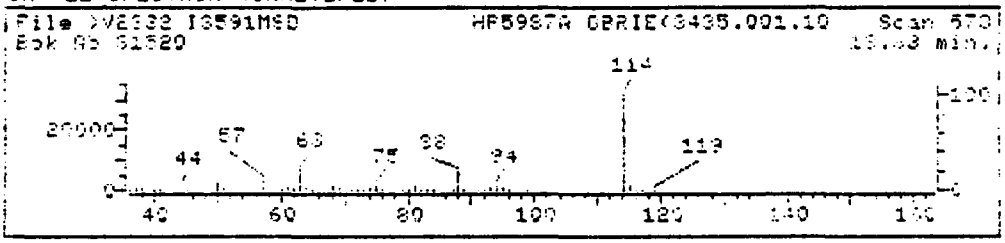
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



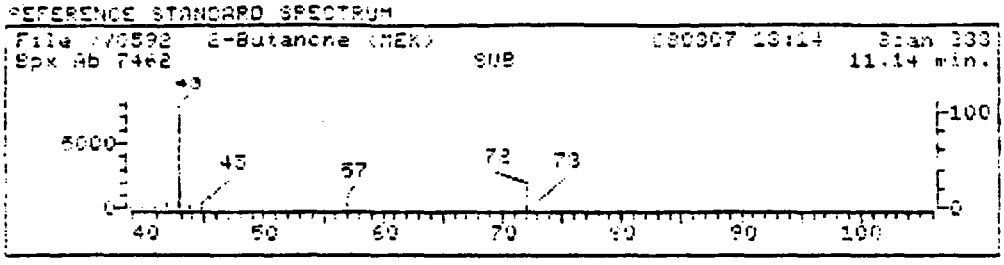
SAMPLE SPECTRUM (UNALTERED)



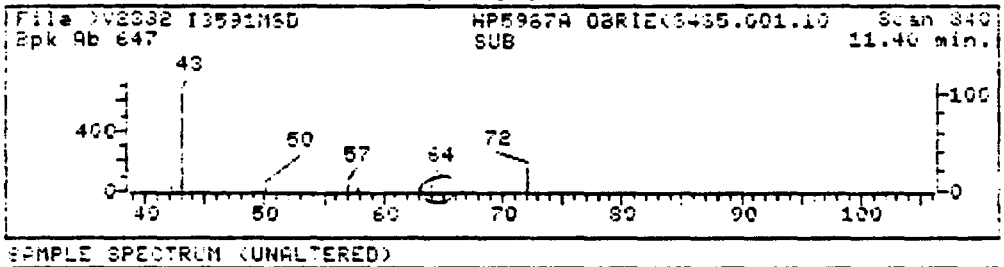
Data File: :V0332::02 Quant Output File: :V0332::01
Name: I3591M5D
Misc: HP5987A CBRIE(3435.001.100)F1
Quant Time: 890419 14:43 Quant ID File: IDUML::E.
Injected at: 890419 13:56 Last Calibration: 890419 10:5E

Compound No: 18 (ISTD)
Compound Name: 1,4-Difluorobenzene
Scan Number: 570
Retention Time: 18.63 min.
Quant Ion: 114.0
Area: 578083
Concentration: 250.00 NG
q-value: 100

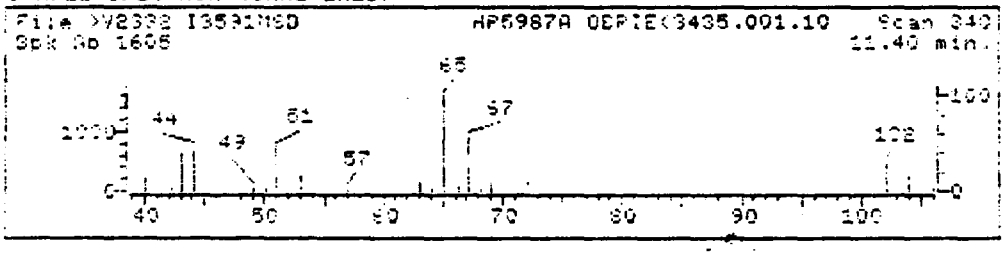
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



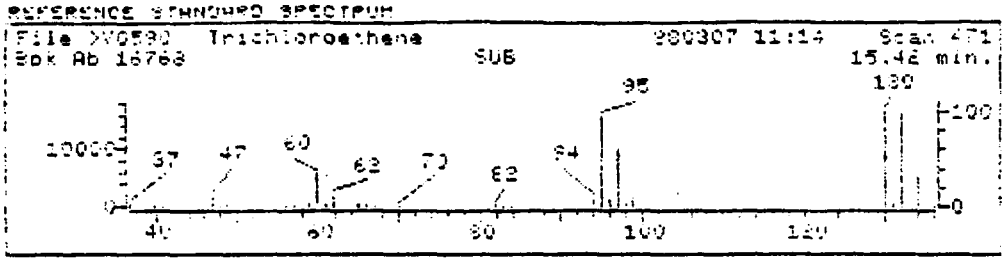
SAMPLE SPECTRUM (UNALTERED)



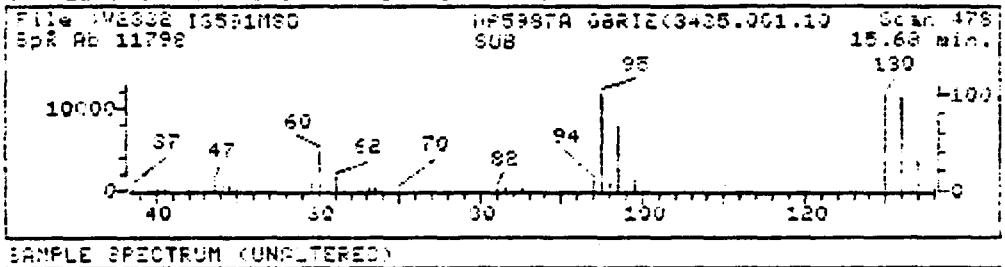
Data File: >V2332::D2 Quant Output File: >V2332::D1
Name: I3591M5D
Misc: HP5987A 08RIE(3435.001.100)F1
Quant Time: 890419 14:43 Quant ID File: ID:ML::EM
Injected at: 890419 13:56 Last Calibration: 890419 10:58

Compound No: 19
Compound Name: 2-Butanone
Scan Number: 340
Retention Time: 11.40 min.
Quant Ion: 72.0
Area: 1517
Concentration: 24.59 NG
a-value: 92

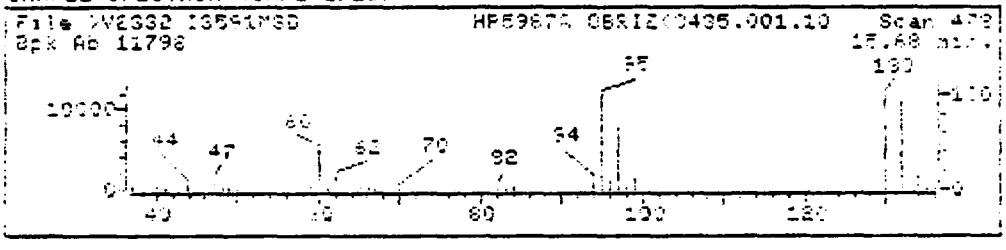
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



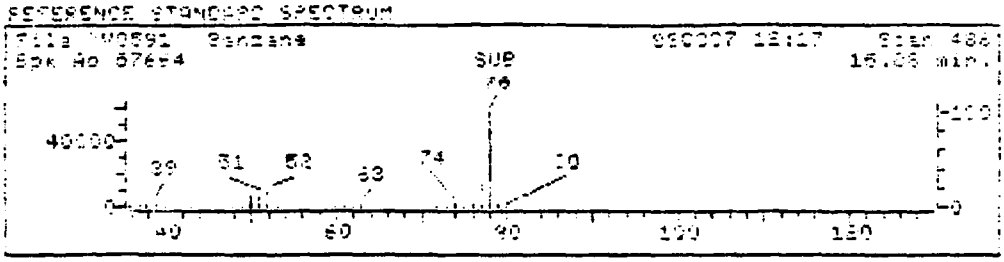
SAMPLE SPECTRUM (UNFILTERED)



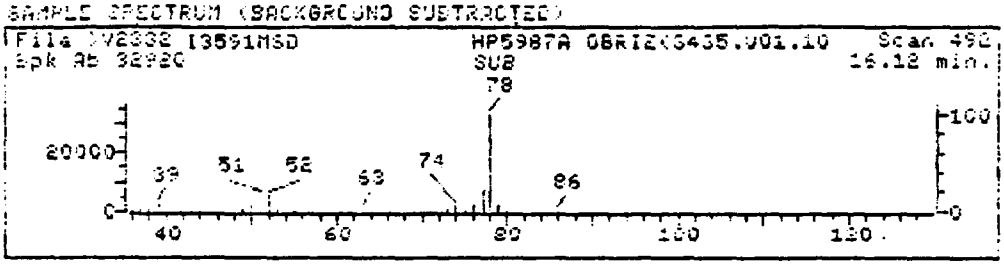
Data File: >V2332:[02] Quant Output File: ^V2332:[01]
Name: I3591MSD
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890417 14:43 Quant ID File: IDUML:[0]
Injected at: 890419 13:56 Last Calibration: 890419 10:50

Compound No: 28
Compound Name: Trichloroethene
Scan Number: 475
Retention Time: 15.68 min.
Quant Ion: 130.0
Area: 15164M
Concentration: 257.06 NG
qvalue: 98

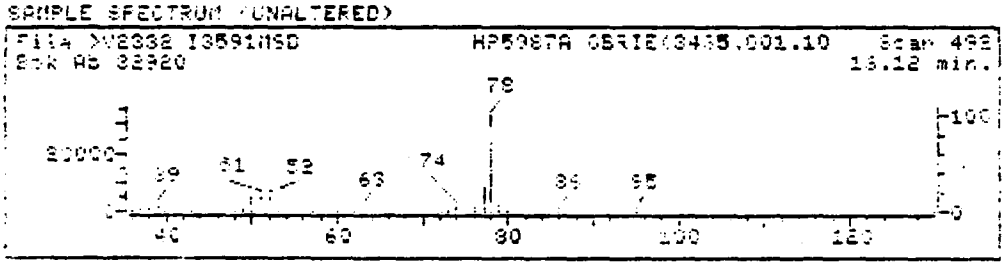
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



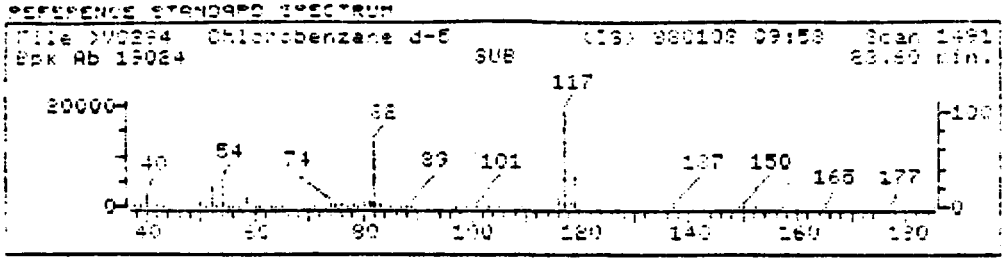
SAMPLE SPECTRUM (UNALTERED)



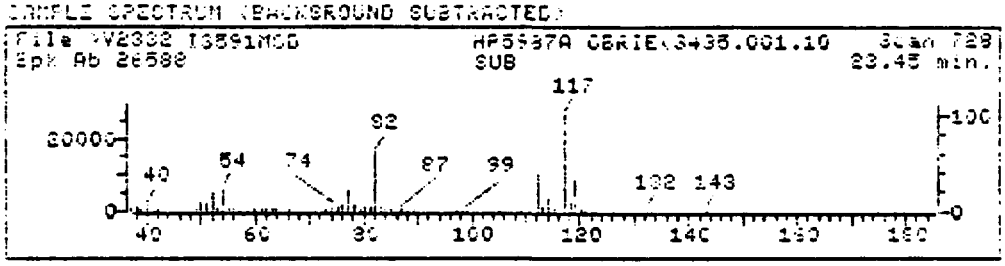
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3591MSD
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 14:45 Quant ID File: IDMDL::BX
Injected at: 890419 13:56 Last Calibration: 890419 10:50

Compound No: 27
Compound Name: Benzene
Scan Number: 492
Retention Time: 16.12 min.
Quant Ion: 78.0
Area: 382329
Concentration: 255.71 NG
q-value: 100

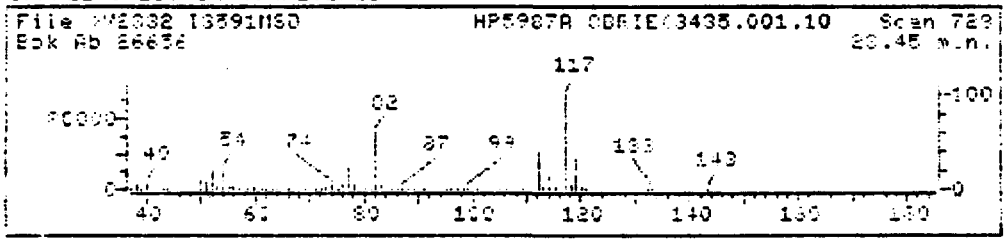
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



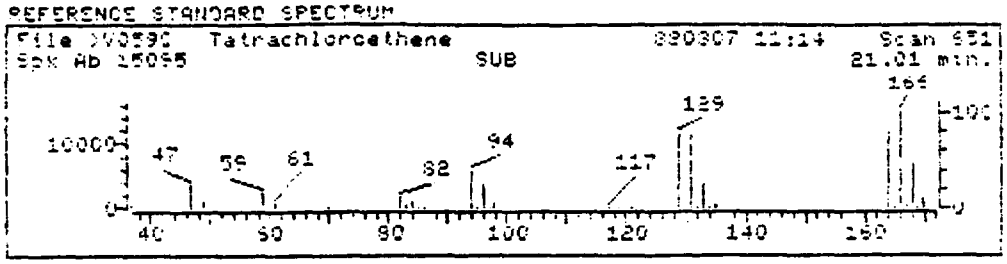
SAMPLE SPECTRUM (UNALTERED)



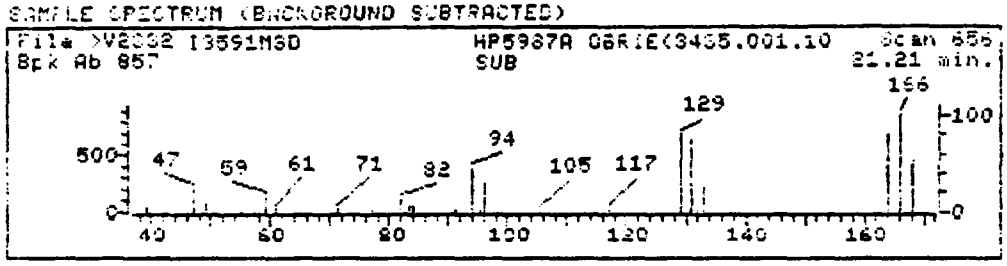
Data File: >V2032::D2 . Quant Output File: ^V2032::D1
Name: I3591N5D
Misc: HP5987A CBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDXML::5%
Injected at: 890419 13:56 Last Calibration: 890419 13:58

Compound No: 32 (ISTD)
Compound Name: Chlorobenzene-d5
Scan Number: 728
Retention Time: 23.45 min.
Quant Ion: 117.0
Area: 330984M
Concentration: 250.00 NG
q-value: 97

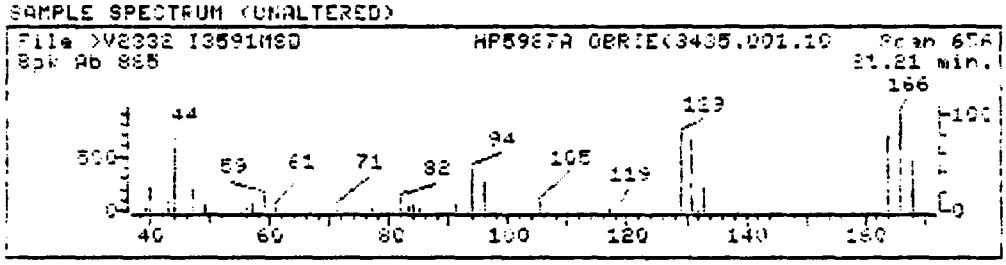
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



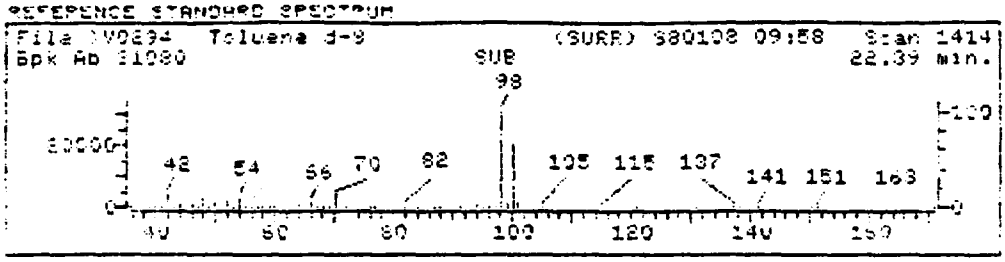
SAMPLE SPECTRUM (UNALTERED)



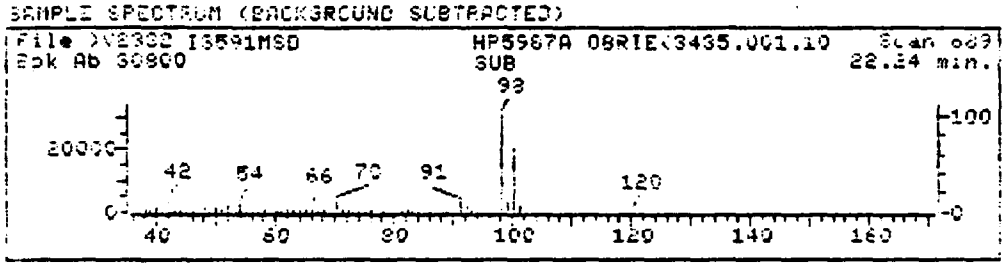
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3591MSD
Misc: HP5987A GBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDVML::EX
Injected at: 890419 13:56 Last Calibration: 890419 10:58

Compound No: 35
Compound Name: Tetrachloroethene
Scan Number: 656
Retention Time: 21.21 min.
Quant Ion: 164.0
Area: 7931
Concentration: 17.74 NG
q-value: 91

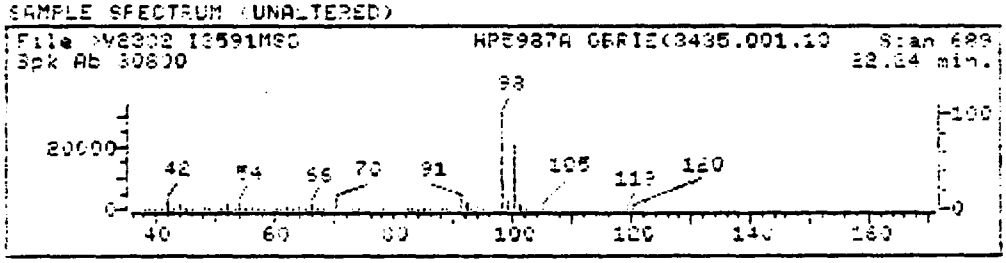
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



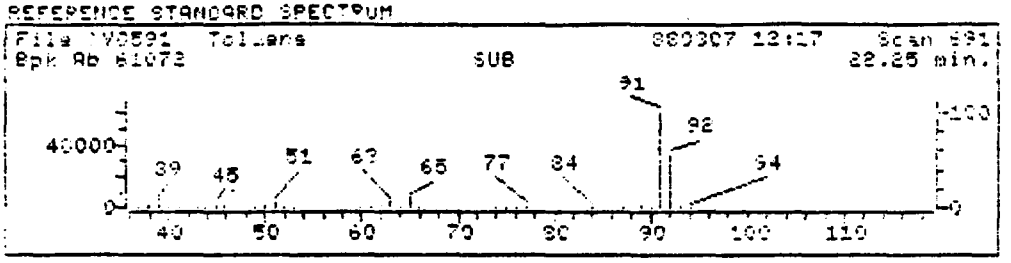
SAMPLE SPECTRUM (UNALTERED)



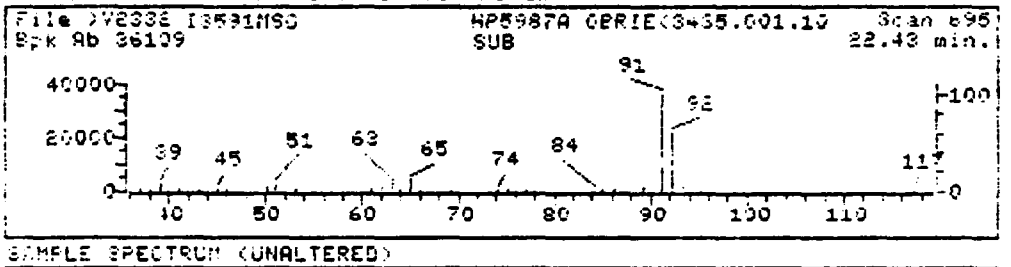
Data File: >V2332::D2 Quant Output File: >V2332::D1
Name: I3591MSD
Misc: HP5987A 08RIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: I3VML::EX
Injected at: 890419 13:56 Last Calibration: 890419 10:50

Compound No: 37
Compound Name: Toluene-d8
Scan Number: 689
Retention Time: 22.24 min.
Quant Ion: 98.0
Area: 3.9628M
Concentration: 215.08 NG
q-value: 100

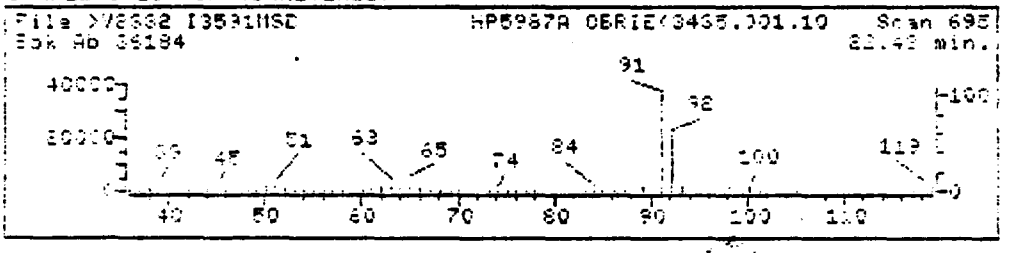
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



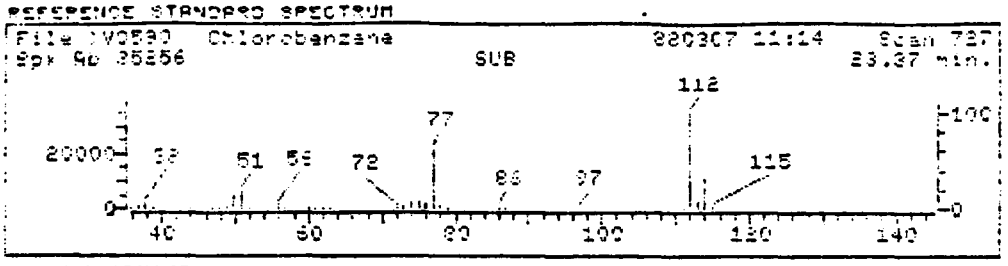
SAMPLE SPECTRUM (UNALTERED)



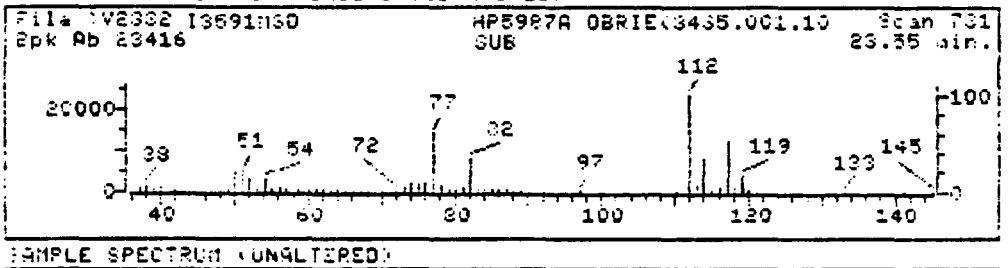
Data File: >V2332::D2 Quant Output File: ^V2332::01
Name: I3591MSD
Misc: HP5987A QBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDUML::SV
Injected at: 890419 13:56 Last Calibration: 890419 10:57

Compound No: 36
Compound Name: Toluene
Scan Number: 695
Retention Time: 22.43 min.
Quant Ion: 92.0
Area: 259649M
Concentration: 244.91 NG
q-value: 93

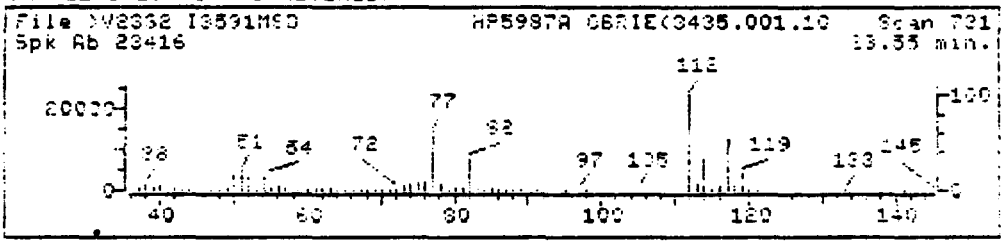
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



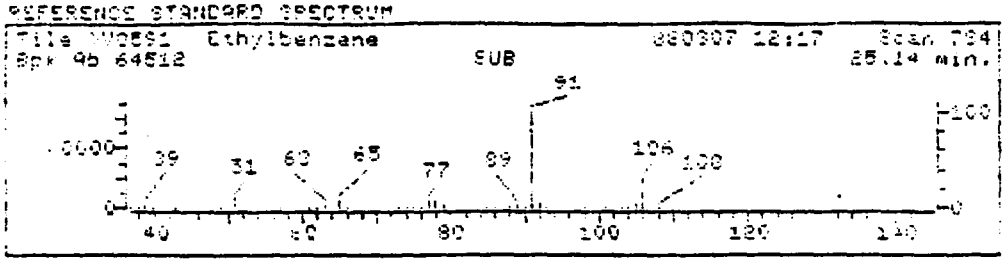
SAMPLE SPECTRUM (UNALTERED)



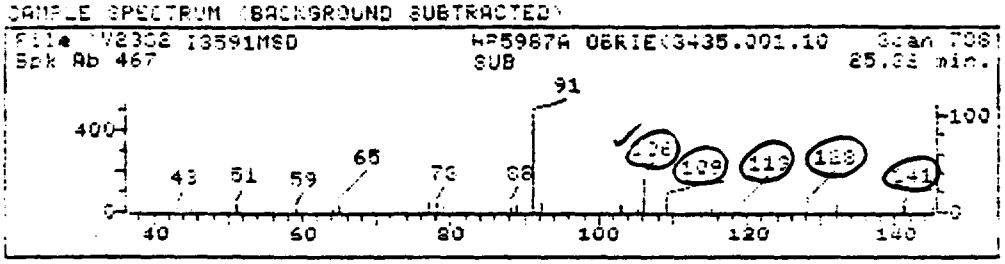
Data File: >V2332::02 Quant Output File: ^V2332::01
Name: I3691MSD
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDWBL::EX
Injected at: 890419 13:56 Last Calibration: 890419 10:50

Compound No: 39
Compound Name: Chlorobenzene
Scan Number: 731
Retention Time: 23.55 min.
Quant Ion: 112.0
Area: 305000
Concentration: 234.25 NG
q-value: 98

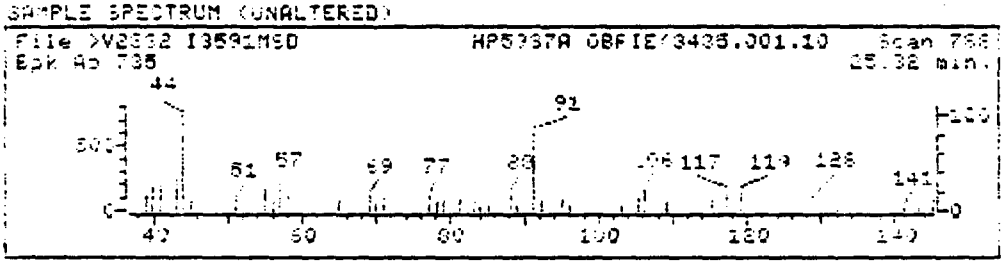
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



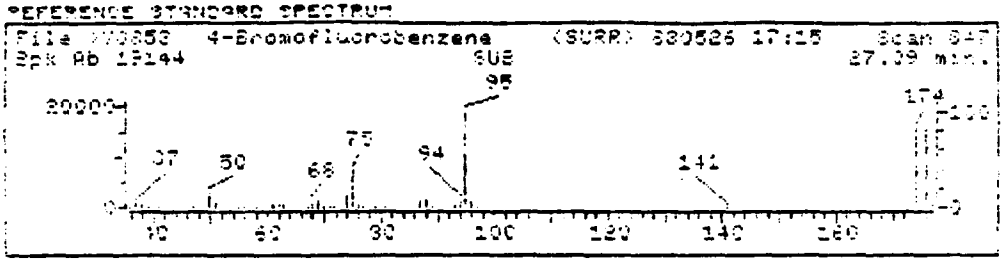
SAMPLE SPECTRUM (UNALTERED)



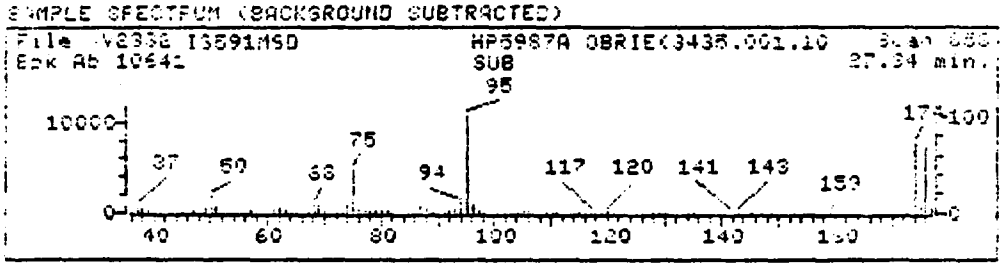
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3591MSD
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: ID^ML::EN
Injected at: 890419 13:56 Last Calibration: 890419 10:38

Compound No: 40
Compound Name: Ethylbenzene
Scan Number: 788
Retention Time: 25.32 min.
Quant Ion: 106.0
Area: 2387M
Concentration: 3.81 NG
Qualifier: 88

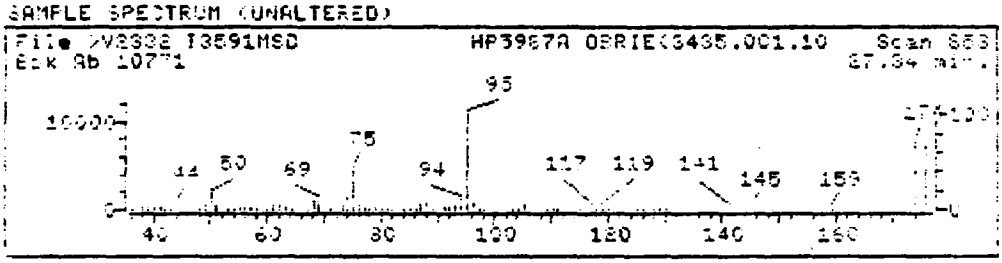
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



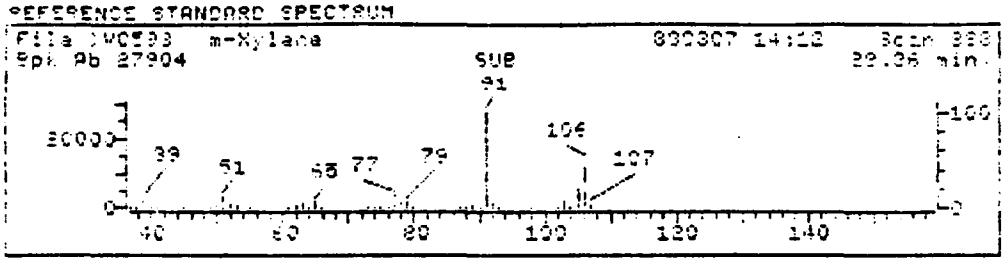
SAMPLE SPECTRUM (UNALTERED)



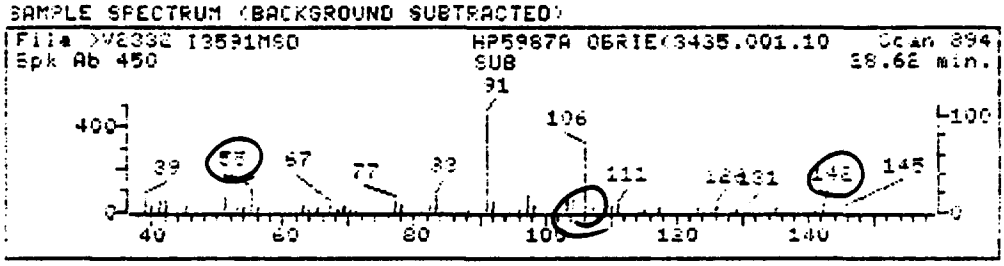
Data File: >V2332:02 Quant Output File: \V2332:01
Name: I3591MSD
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: ID:NL:48
Injected at: 890419 13:56 Last Calibration: 890419 10:37

Compound No: 41
Compound Name: Bromofluorobenzene
Scan Number: 933
Retention Time: 27.34 min.
Quant Ion: 95.0
Area: 178477M
Concentration: 213.51 NG
q-value: 95

REFERENCE STANDARD SPECTRUM

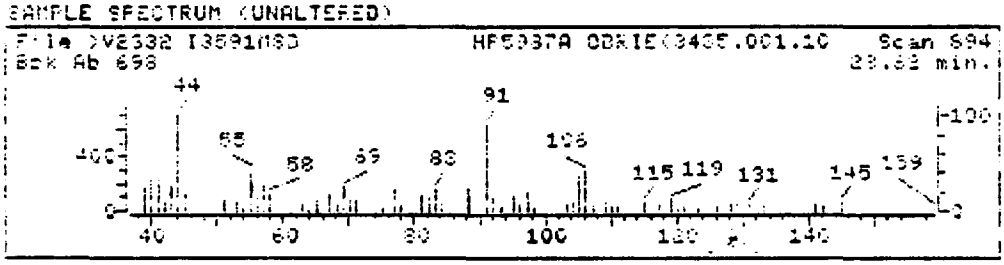


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



x bkg interference

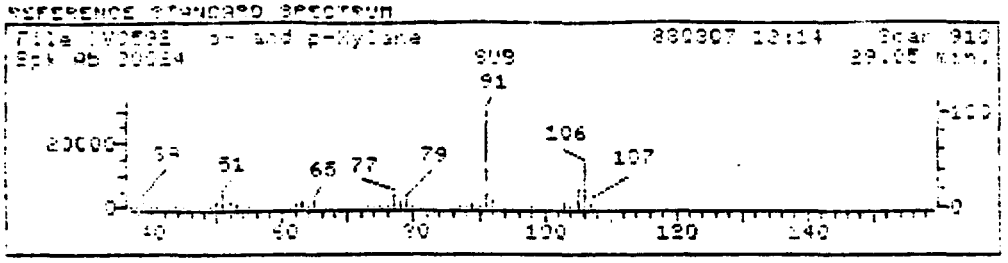
SAMPLE SPECTRUM (UNALTERED)



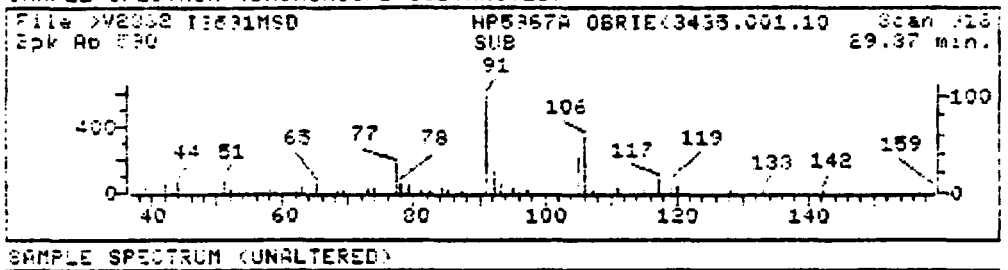
Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3591M8D
Misc: HP5987A CBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDVML::EX
Injected at: 890419 13:56 Last Calibration: 890419 10:58

Compound No: 43
Compound Name: m-Xylene
Scan Number: 894
Retention Time: 28.62 min.
Quant Ion: 106.0
Area: 501.2M
Concentration: 6.57 NG
Q-value: 77

REFERENCE STANDARD SPECTRUM

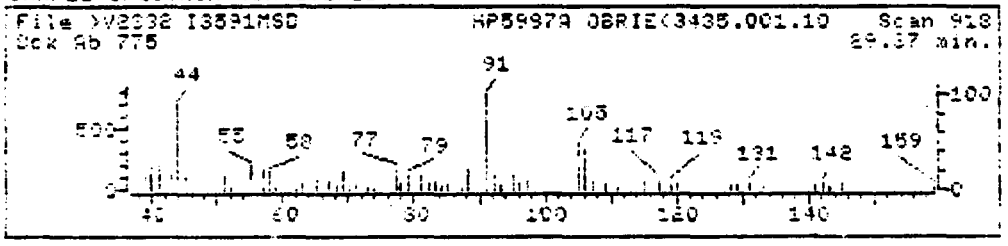


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



compare w/MS & sample

SAMPLE SPECTRUM (UNALTERED)



Data File: >V2332::D2 Quant Output File: ^V2332::D1
Name: I3691MSD
Misc: HP5987A OBRIE(3435.001.100)P1
Quant Time: 890419 14:43 Quant ID File: IDVOL::5
Injected at: 890419 13:56 Last Calibration: 890419 10:58

Compound No: 44
Compound Name: Xylene (total)
Scan Number: 918
Retention Time: 29.37 min
Quant Ion: 106.0
Area: 6540M •
Concentration: 0.76 UG
Qvalue: 78